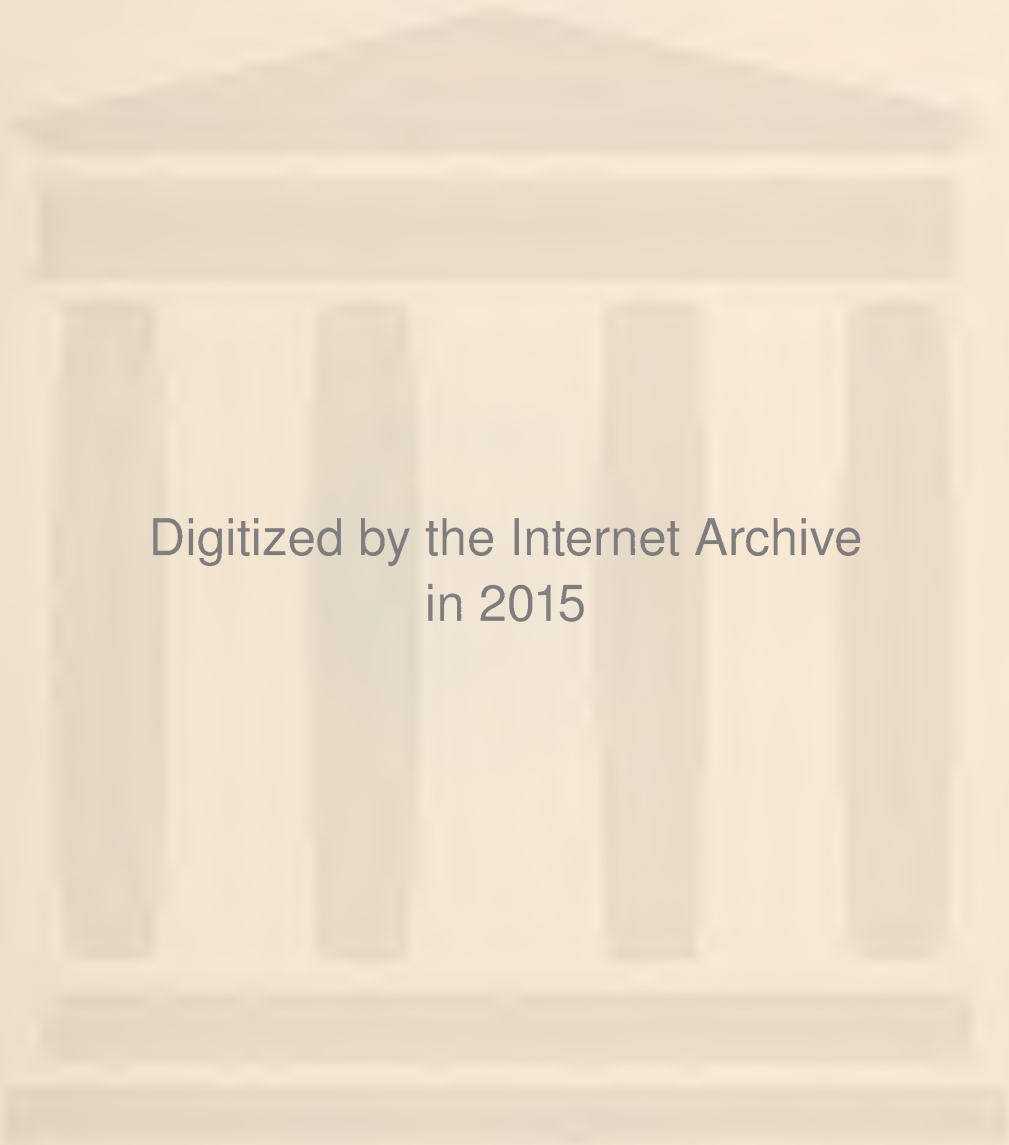
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The Illinois Medical Journal

The Official Journal Of

The Illinois State Medical Society

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Acute Laryngo-Tracheo-Bronchitis and Its Management

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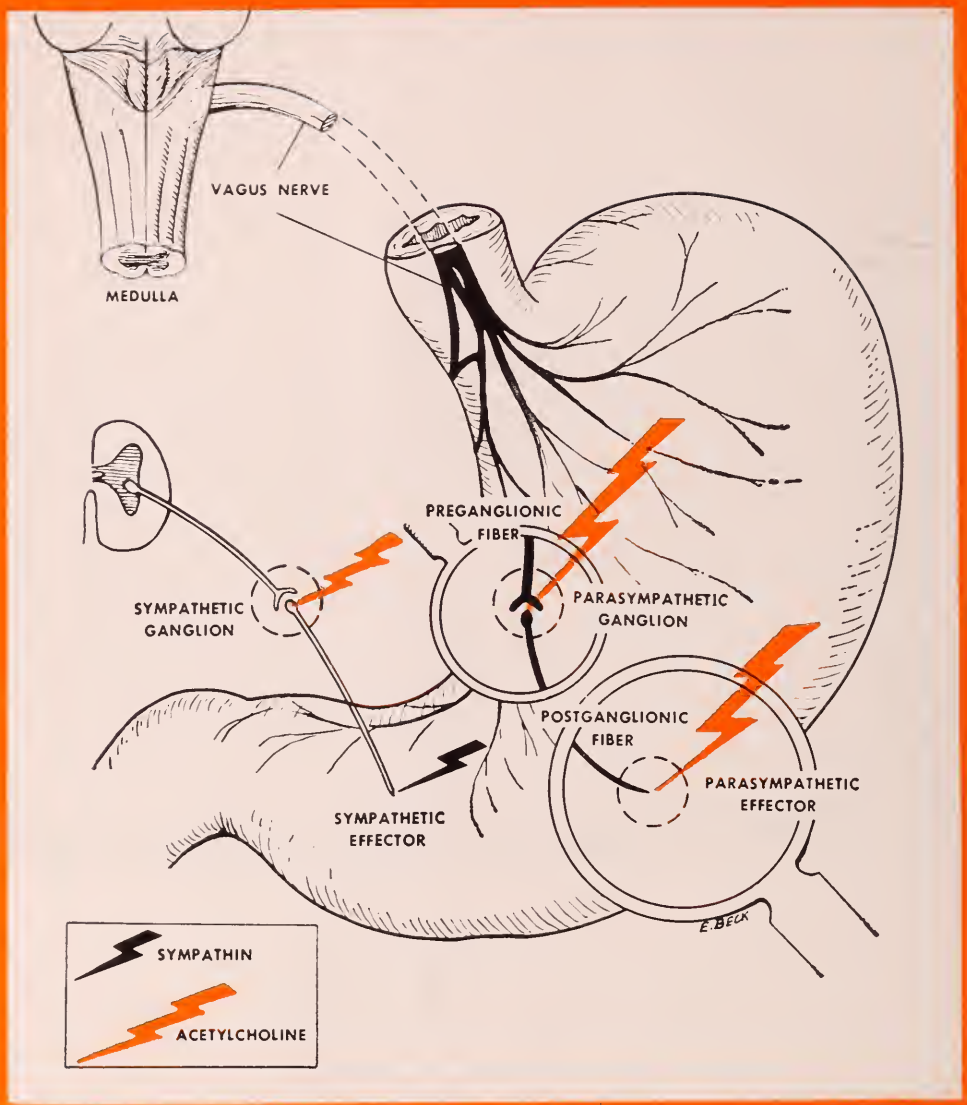
Radioiodine in Diagnosis and Treatment of Diseases of the Thyroid

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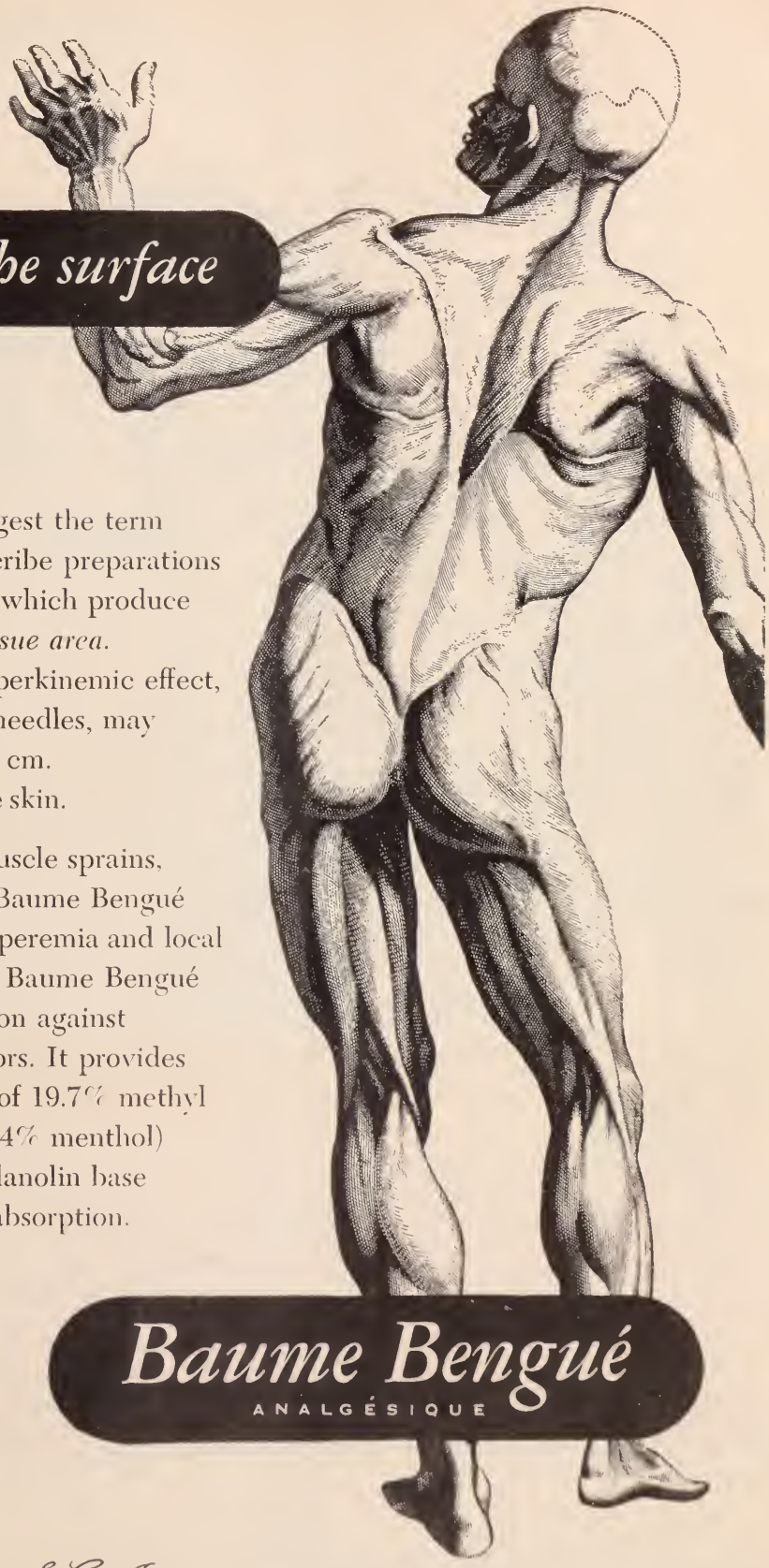
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1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.

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1. King, E. Q.; Lewis, C. N.; Welch, H.; Clark, E. A., Jr.; Johnson, J. B.; Lyons, J. B.; Scott, R. B., and Cornely, P. B.: J.A.M.A. 143:1 (May 6) 1950.
2. Herrell, W. E.; Heilman, F. R.; Wellman, W. E., and Bartholomew, L. A.: Proc. Staff Meet. Mayo Clin. 25:183 (April 12) 1950.

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Tonsillitis	**Otitis Media**	**Gonorrhea**

You will also find 'Eskacillin-Sulfas' especially useful in urinary tract infections; bacillary dysentery; meningococcic infections; prophylaxis in streptococcal infections and rheumatic fever; as adjunctive therapy in pneumococcal meningitis and H. influenzae meningitis after the acute phase has subsided; prophylaxis in colonic surgery, surgical wounds and burns; and in certain resistant staphylococcal infections.

'Eskacillin' T.M. Reg. U.S. Pat. Off.

Due to its extremely wide antibacterial spectrum and the minimum chance of the development of resistant strains, many physicians find 'Eskacillin-Sulfas' the ideal therapy when immediate medication is necessary and lack of either time or laboratory facilities prevents exact determination of the specific organism involved.

Each teaspoonful (5 cc.) of 'Eskacillin-Sulfas' contains:

Crystalline potassium penicillin G	100,000 U.
Sulfadiazine	0.167 Gm.
Sulfamerazine	0.167 Gm.
Sulfamethazine	0.167 Gm.

'ESKACILLIN-SULFAS'

the original presentation of penicillin and the sulfonamides in fluid form

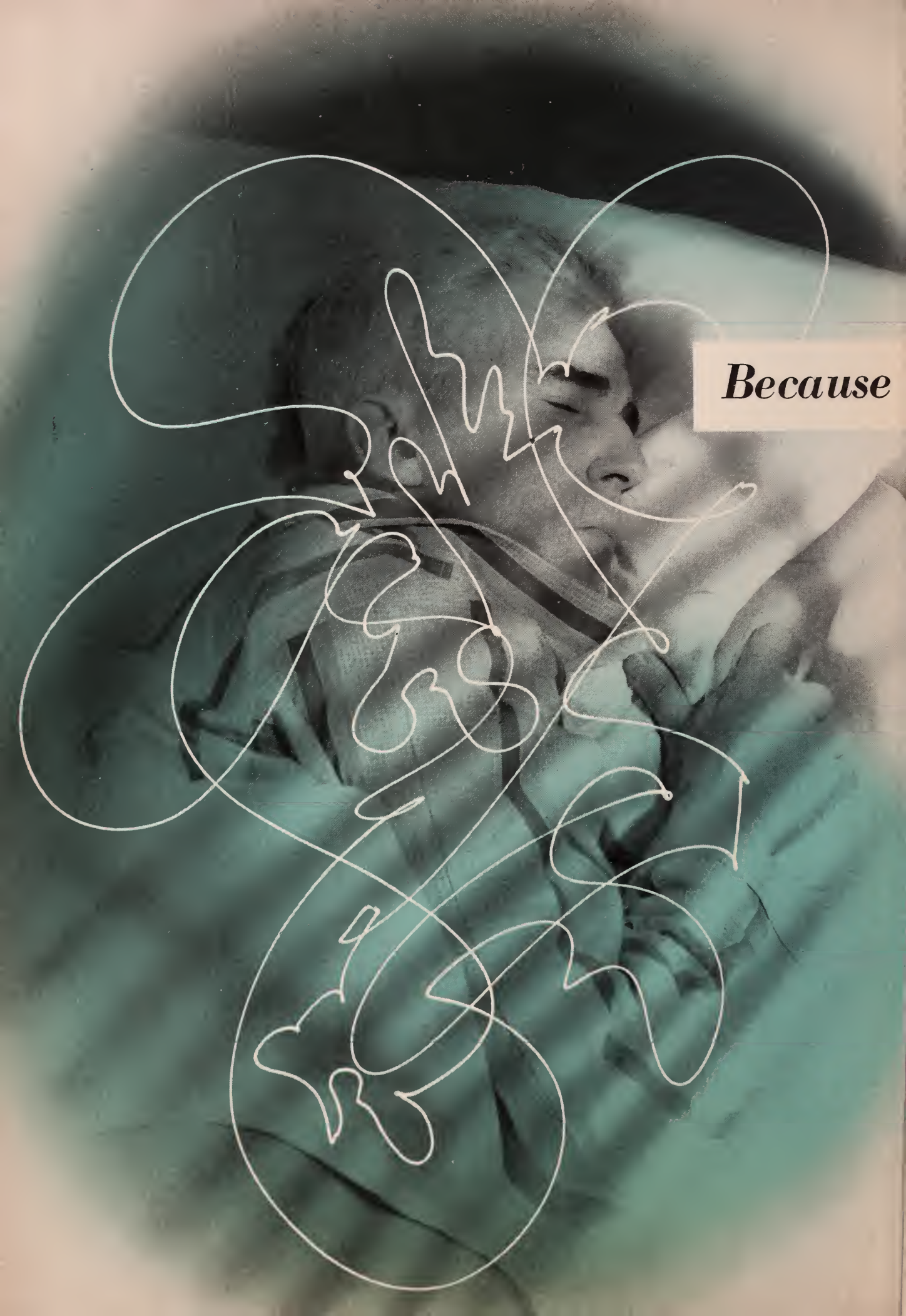
Available in 2 fl. oz. bottles. *Smith, Kline & French Laboratories, Philadelphia*

why 'Eskacillin-Sulfas' is in fluid form:

We concluded—after weighing every possibility—that 'Eskacillin-Sulfas' should be a *fluid* for the following reasons:

1. Tablets are impractical because the bulky nature of the sulfonamides makes it virtually impossible to manufacture a small, easily-swallowed tablet.
2. The fluid form assures more rapid attainment of therapeutic blood levels.
3. A palatable fluid is the ideal form for children and for the many adults who balk at, or have difficulty with, tablet medication.

'Eskacillin-Sulfas' is so pleasant tasting your patients will find it easy to take whatever amount you prescribe—and, because of its fluid form, you will find it easy to adjust the dosage.


Because

patients can't

"SLEEP OFF" *hypertension...*

prolonged vasodilation should accompany sleep as well as the day's activities. (One more reason why NITRANITOL is the most universally prescribed drug in the management of hypertension.)

NITRANITOL®

FOR GRADUAL, PROLONGED, SAFE VASODILATION

Merrell
1828
CINCINNATI • U.S.A.

When vasodilation alone is indicated. *Nitranitol.* (½ gr. mannitol hexanitrate.)

When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combines Rutin 20 mg. with above formula.)

When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline.* (½ gr. mannitol hexanitrate combined with ¼ gr. Phenobarbital and 1½ grs. Theophylline.)

What is

GANTRISIN

---

1 A new, *safer* sulfonamide with a wider antibacterial spectrum.

same indications as other sulfonamides?

2 More; it has been effective in some infections not responsive to other sulfonamides and antibiotics.

how about toxicity?

3 High solubility prevents renal blocking. Incidence of other reactions is also very low.

'ROCHE'?

should the patient be alkalized?

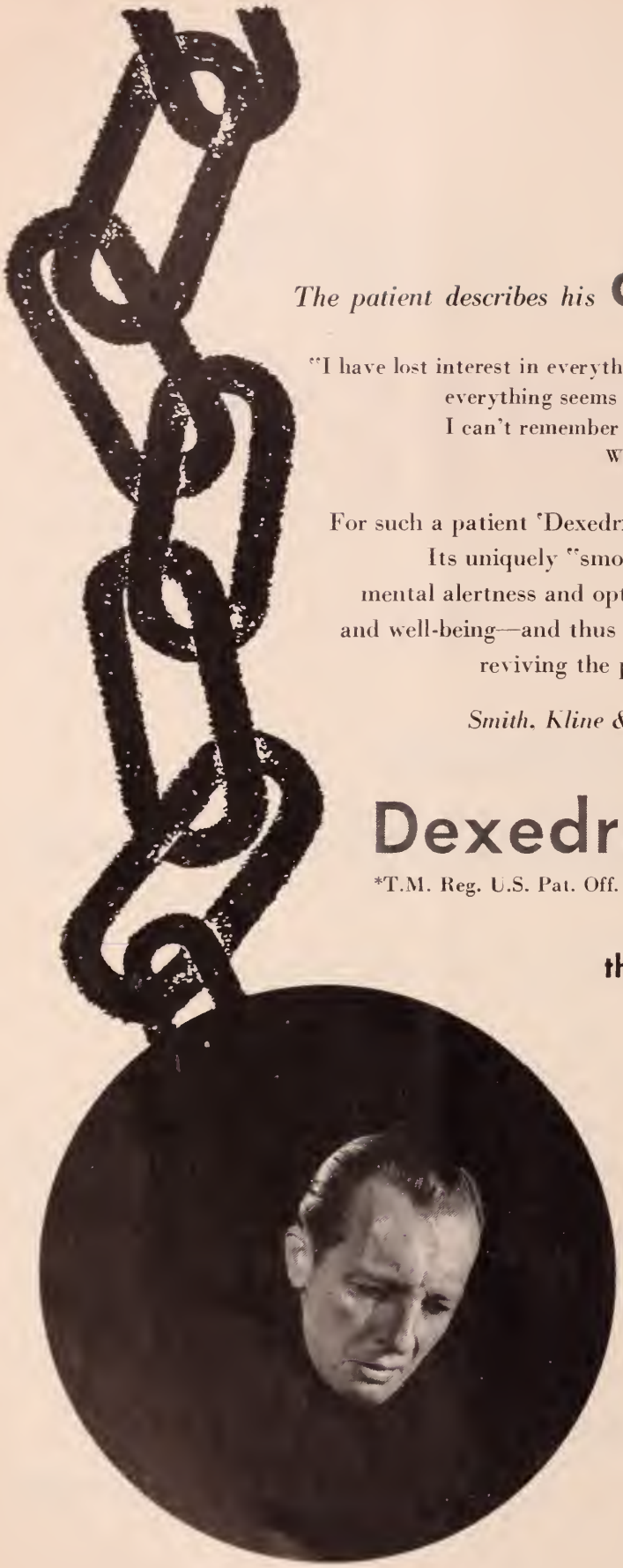
4 Not necessary with Gantrisin® because of its high solubility.

how about cost?

5 Gantrisin is so economical that it can be prescribed without straining the patient's budget.

HOFFMANN-LA ROCHE INC.

Roche Park • Nutley 10 • New Jersey



The patient describes his **depression:**

"I have lost interest in everything—I have no ambition any more—
everything seems futile—I feel frustrated and lonely—
I can't remember or concentrate—I am *all slowed up.*"
Washburne, A.C.: Ann. Int. Med *32*:265, 1950.

For such a patient 'Dexedrine' Sulfate is of unequalled value. Its uniquely "smooth" antidepressant effect restores mental alertness and optimism, induces a feeling of energy and well-being—and thus has the happy effect of once again reviving the patient's interest in life and living.

Smith, Kline & French Laboratories, Philadelphia

Dexedrine* Sulfate

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

the antidepressant of choice

tablets

elixir

new ...*in allergic diseases*



8 to 10
symptom-free hours
of continuous relief
through the day
or night

...with just one

CHLOR-*TRIMETON maleate**

(brand of chlorprophenpyridamine maleate)

*T.M.

Repeat Action tablet (8 mg.)

Each tablet contains:
two layers of 4 mg. Chlor-*Trimeton*
separated by a special coating

Schering CORPORATION · BLOOMFIELD, NEW JERSEY

Repeat Action Tablets

Pure Crystalline Vitamin B_{12}

The Only Form

Of This Important

Vitamin

Official In The U.S.P.

PREFERRED BECAUSE

potency, purity, and lack of toxicity of *crystalline* vitamin B_{12} are clearly established.

Potency: Potency of this U.S.P. product is accurately determined by precise weight.

Purity: Pure anti-anemia factor.

Efficacy: Produces, in microgram dosage, maximum hematologic and neurologic effects.

Tolerance: Extremely well tolerated; "no evidence of sensitivity" has been reported.

Toxicity Studies:

In recent pharmacologic investigations, extremely large doses of *crystalline* vitamin B_{12} (1,600 mg./Kg.) caused no toxic reactions in any of the animals treated. In contrast, 3 mg./Kg. of a "*concentrate*" caused fatal reactions in 100 per cent of the animals treated.

Merck—first to isolate and produce vitamin B_{12}—supplies Crystalline Vitamin B_{12} in saline solution under the trademark Cobione.* Your pharmacist stocks Cobione in 1 cc. ampuls containing 15 micrograms of crystalline vitamin B_{12}.



Crystalline Vitamin B_{12}

* *Cobione is the registered trade-mark of Merck & Co., Inc. for its brand of Crystalline Vitamin B_{12}.*

B_{12} COBIONE®

Crystalline Vitamin B_{12} Merck

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

New York, N. Y. · Philadelphia, Pa. · St. Louis, Mo. · Chicago, Ill. · Elkton, Va. · Danville, Pa. · Los Angeles, Calif.
In Canada: MERCK & CO. Limited. Montreal · Toronto · Valleyfield

ANNOUNCING...

White's Dram-cillin with Triple Sulfonamides

...provides an additive antibacterial effect

More rapid and effective control of certain bacterial infections offered by combined use of antibiotic and chemotherapeutic agents. (Vollmer, H., Pomerance, H. H. and Brandt, I. K.: New York State J. Med. *50*:2293, 1950.)

...against a wide range of organisms

Both gram-positive and gram-negative pathogens, including majority of coccal and many bacillary types, are affected by penicillin plus sulfonamide. (Kolmer, J. A.: Amer. J. Med. Sc. *215*:136, 1948.)

...in adequate dosage

Each teaspoonful (5 cc.) contains 100,000 units of penicillin G potassium and 0.5 Gm. of triple sulfonamide mixture (equal parts of sulfadiazine, sulfamerazine and sulfacetimide).

...pleasant, orally administered form

Oral penicillin as effective as parenteral in adequate dosage, less likely to produce reactions. (Keefer, C. S.: Amer. J. Med. *7*:216, 1949.)

...and with extremely low toxicity

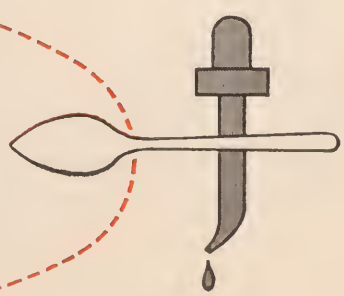
Combined sulfonamides permit smaller, safer dosage of each, thus minimizing undesired hazard of renal blockage due to crystalluria. (Kolmer, J. A.: Texas State M. J. *44*:81, 1948.)

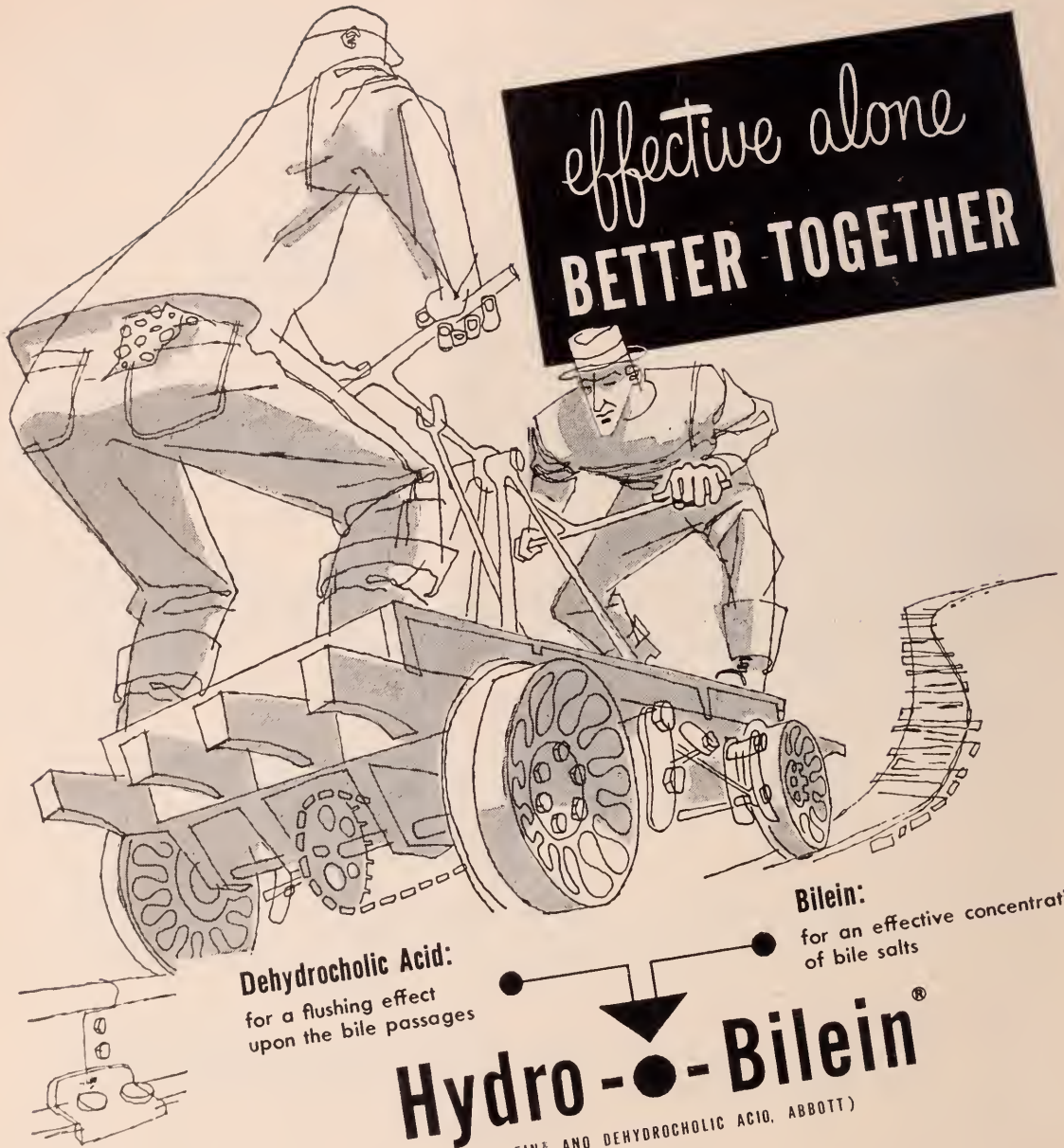
WHITE LABORATORIES, INC., Pharmaceutical Manufacturers, Newark 7, N. J.

ALSO AVAILABLE:
Two Convenient Forms of Oral Penicillin.

DRAM-CILLIN
100,000 units of penicillin G potassium in each teaspoonful (5 cc.)

DROP-CILLIN
50,000 units of penicillin G potassium in each dropperful (0.75 cc.)





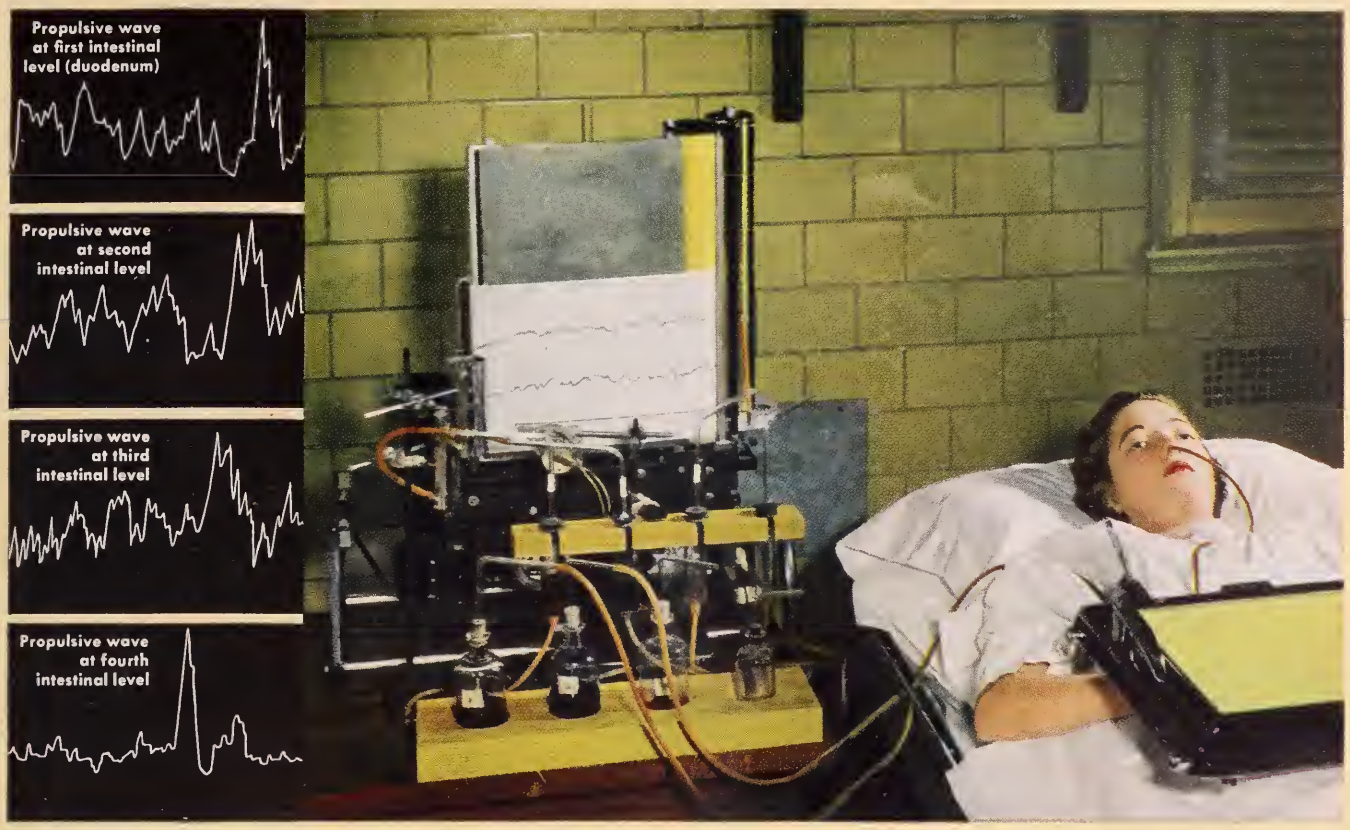
You are familiar with the choleretic action of bile salts, with the flushing effect of dehydrocholic acid. Now, you may prescribe both in a single preparation, HYDRO-BILEIN.

Each HYDRO-BILEIN tablet contains 2 grs. dehydrocholic acid and 2 grs. dried, purified ox bile (natural unoxidized bile salts). Administered together in this form, their separate functions complement each other—the one sluicing out inspissated bile or products of inflammation from the biliary tract, the other stimulating the production of bile solids. Together they facilitate gall bladder emptying and increase intestinal motility.

The average dose is one tablet two to four times daily, preferably after meals. Dosage may be reduced if it produces an undesired laxative effect.

Your pharmacy has an ample supply of HYDRO-BILEIN in bottles of 100 and 1000 sugar-coated red tablets.

Abbott

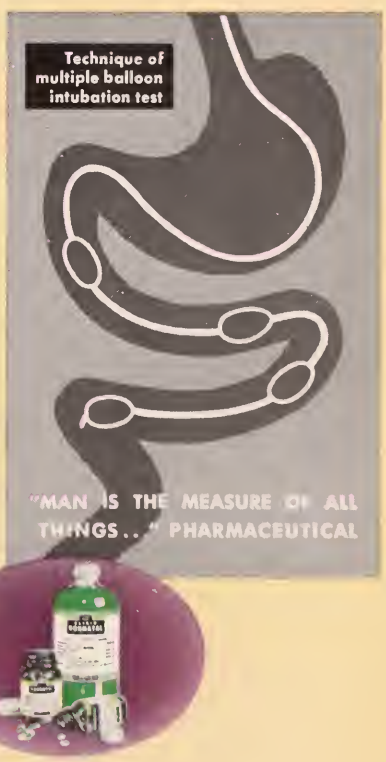


Spasmolysis at its Best . . . by

LIVING TEST

Intubation studies[1,2,3] increasingly confirm the findings of controlled clinical tests and broad professional experience; they dramatically demonstrate the *marked superiority of natural belladonna alkaloids* over the synthetics in relieving smooth muscle spasm.[2,3]

Donnatal employs precise proportions of the principal alkaloids of belladonna, together with a minimal phenobarbital dosage, to intensify the belladonna effects and help correct emotional factors contributing to the provocation of spasm.



REFERENCES: 1. Chapman, W. P., Rowlands, E. N., and Jones, C. M.: New England J. Med., 243:1, 1950. 2. Kramer, P. and Ingelfinger, F. J.: Med. Clin. North America, 32:1227, 1948. 3. Posey, E. L., Bargen, J. A., and Dearing, W. H.: Gastroenterol., 11:344, 1948.

FORMULA: Each tablet, each capsule, and each 5 cc. (1 teaspoonful) of Elixir, contains 0.1037 mg. hyoscyamine sulfate, 0.0194 mg. atropine sulfate, 0.0065 mg. hyoscine hydrobromide, and 16.2 mg. (¼ gr.) phenobarbital.

A. H. ROBINS CO., INC., RICHMOND 20, VA.

Donnatal®

Robins

TABLETS • CAPSULES • ELIXIR

WHENEVER and WHEREVER spasm of smooth muscle causes pain or dysfunction

First aid for the *"digestive casualty"*

Entozyme greatly simplifies a broad therapeutic approach to many often complex disturbances of the gastro-intestinal tract, through its provision of potent amounts of the principal digestive enzymes: pepsin, pancreatin (with its lipase, amylase, and trypsin), and bile. Its special "tablet-within-a-tablet" construction controls the release of each essential digestive enzyme at its own appropriate gastro-enteric level... in its optimal state of enzymatic activity. This unique action explains the relief gratifyingly elicited in so many cases of pathologic or functional impairment of the digestive process.[1,2,3]

REFERENCES: 1. Kammandel, H. et al.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps. (in press). 2. McGavack, T. H. and Klotz, S. D.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps., 9:61, 1946. 3. Weissberg, J. et al.: Am. J. Dig. Dis., 15:332, 1948.

FORMULA: Each tablet contains 300 mg. pancreatin, U.S.P., 250 mg. pepsin N.F., and 150 mg. bile salts.

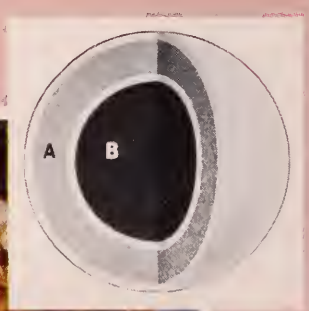
A. H. ROBINS CO., INC., RICHMOND 20, VA.

ENTOZYME®

Robins

A SINGULARLY effective, DOUBLE-layered tablet, with TRIPLE-enzyme digestive action.

Gastro-soluble enzymes are released from outer shell (A) *in stomach; entero-active enzymes from inner core* (B) *in duodenum and jejunum.*





"us doctors agree Eskadiazine tastes better"

Patients of all ages take Eskadiazine willingly—it is so good tasting, so light, so easy to swallow. Furthermore, Eskadiazine *acts faster* because it contains—instead of ordinary sulfadiazine—S.K.F.'s microcrystalline sulfadiazine in a stabilized suspension. With Eskadiazine desired serum levels may be attained 3 to 5 times more rapidly than with sulfadiazine in tablet form. No wonder Eskadiazine stands above all fluid sulfadiazine preparations available today.

Each 5 cc. (one teaspoonful) contains 0.5 Gm. (7.7 gr.) of sulfadiazine—the dosage equivalent of the standard half-gram sulfadiazine tablet.

'Eskadiazine' T. M. Reg. U. S. Pat. Off.

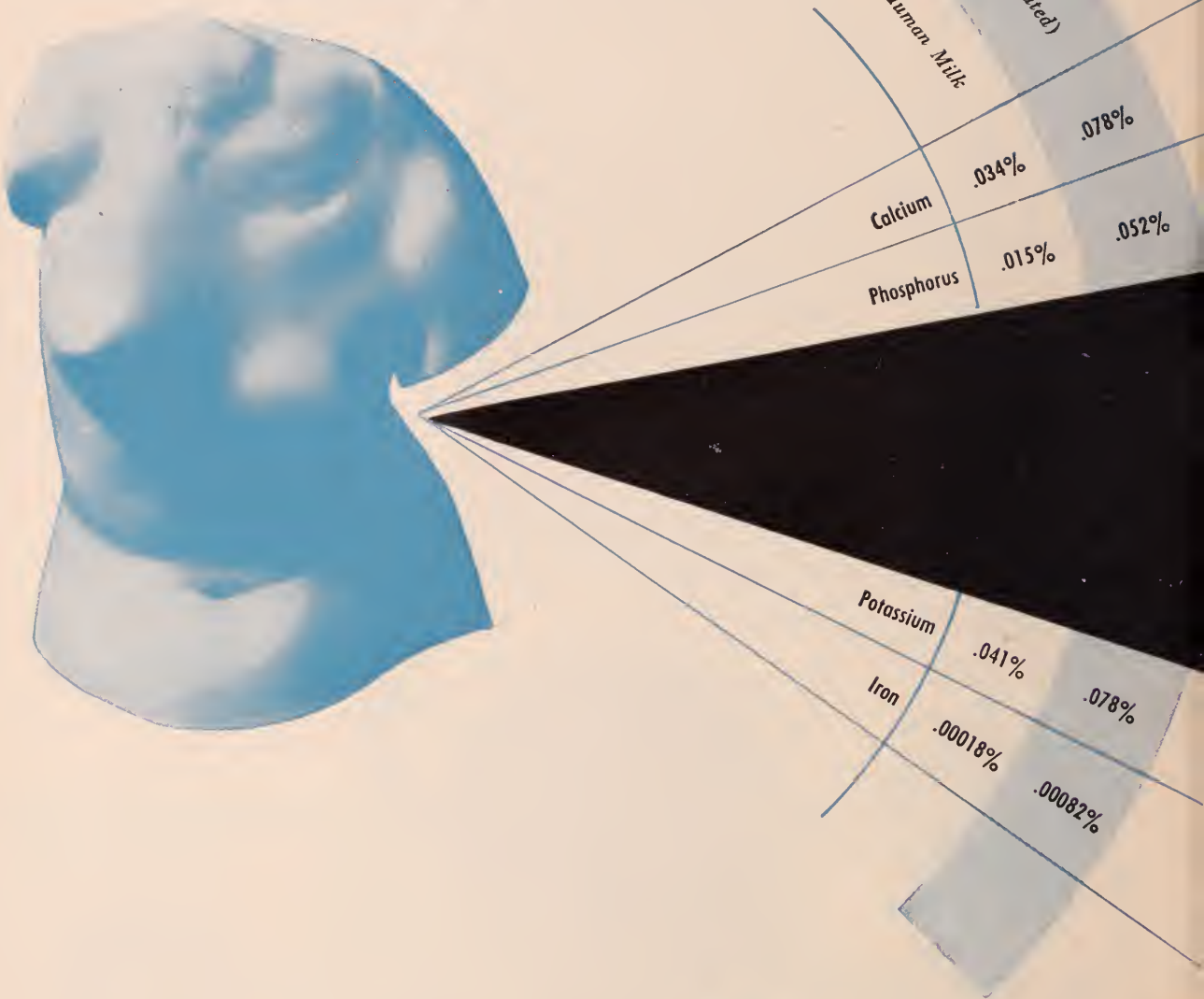
ESKADIAZINE

The outstandingly palatable fluid sulfadiazine

Smith, Kline & French Laboratories, Philadelphia



a **new** *product*



flexible, palatable, easy to prepare

Bremil

conforming to the pattern of human milk . . .



BREMIL—newest product of Borden research—introduces a significant advance in infant nutrition.

BREMIL is a completely modified milk in which nutritionally essential elements of cow's milk have been adjusted in order to supply the nutritional requirements of infants deprived of human milk.

In **BREMIL** the calcium-phosphorus ratio is adjusted to a minimum of 1½ parts calcium to 1 part phosphorus. Gardner, Butler, et al., state: "Relative to human milk, cow's milk has a low Ca:P ratio..."[1] Nesbit states: "Tetany of the newborn is now recognized as a definite entity... and often accompanied by an increased phosphorus and lowered blood calcium."[2]

BREMIL is fortified with ascorbic acid (vitamin C) not only for its antiscorbutic properties but also for its value in preventing megaloblastic anemia.[3]

BREMIL has the fatty acid pattern of human milk... a scientific blending of three carefully selected vegetable oils (palm, coconut, peanut) which compares with human milk fat in physical, chemical and metabolic characteristics.

BREMIL has the amino acid pattern of human milk... with methionine added thereby "improving the biologic value of milk proteins."[4]

BREMIL is easily digested as it forms a soft flocculent curd of small particle size comparable to human milk.

BREMIL supplies the same carbohydrate (lactose) as breast milk... no additional carbohydrate is needed in the preparation of **BREMIL** formulas.

In **BREMIL** vitamins A and D, thiamine, riboflavin, niacin, and ascorbic acid have been *standardized at or above* the recommended daily allowances for infants as established by the National Research Council (revised 1948).

BREMIL is available in drugstores in 1 lb. cans.

Complete information and a trial supply may be obtained upon request.

1. Gardner, L. I.; MacLachlan, E. A.; Pick, W.; Terry, M. L., and Butler, A. M.: *Pediatrics* 5:228, 1950.
2. Nesbit, H. T.: *Texas State J. M.* 38:551, 1943.
3. May, C. D., et al.: *Bull. Univ. Minnesota Hospitals* 21:208, 1950.
4. Block, R. J.: *J. Am. Dietetic Assn.* 25:937, 1949.

powdered infant food

Prescription Products Division
The **BORDEN** *Company*
350 Madison Avenue, New York 17, N. Y.

to make the

APPETITE *fit* THE DIET



It is well known that the craving for food which besets many obese people cannot easily be controlled by the will alone. For them, adherence to a reducing diet often imposes a nervous strain, with consequent tension and irritability; and if they succumb to their urge to eat more, they have a sense of failure.

But appetite can now be modified by oral administration of 'Methedrine'. Then avoidance of over-eating becomes practically effortless, and the patient feels fitter and cheerful, as well as satisfied . . . with his meals and with his achievement.

Trials have shown that 'Methedrine' is a reliable anorexiant, and that it is effective in low dosage.

Literature describing dosage and recommended regimen will be sent on request.

REFERENCES:

Ray, H. M.: Am. J. Digest. Dis., 14:155, 1947.
Shapiro, S.: ibid, 14:261, 1947.

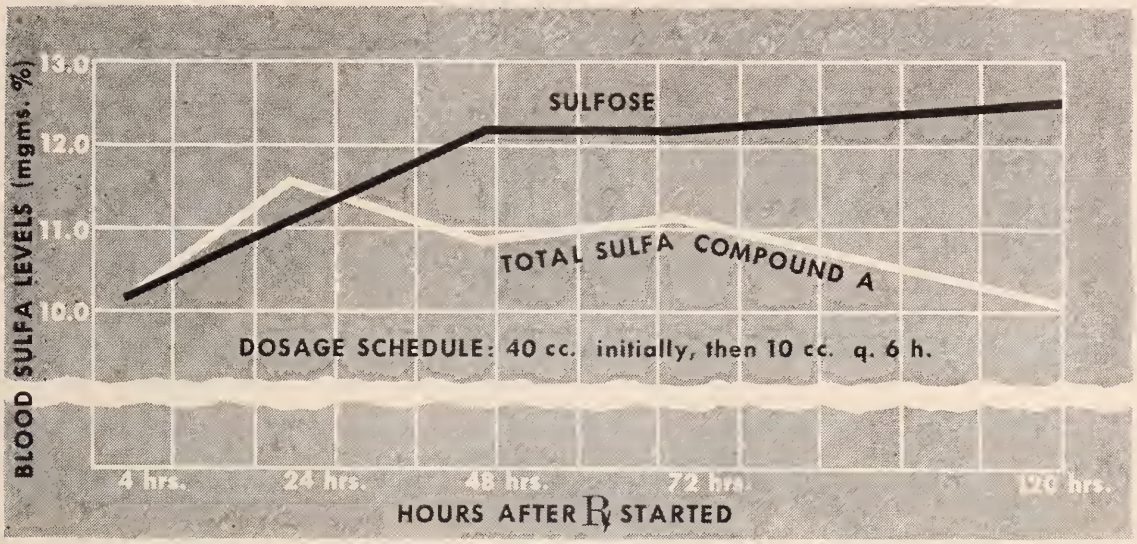
'METHEDRINE'® brand

Methamphetamine Hydrochloride (d-Desoxyephedrine Hydrochloride)

Compressed products of 5 mg.—Scored to facilitate division.

BURROUGHS WELLCOME & CO., (U.S.A.) INC. TUCKAHOE 7, NEW YORK

A New and Better Triple Sulfonamide Suspension that provides higher, sustained blood levels



A comparison of blood sulfonamide levels on equal doses of SULFOSE and a control preparation having the same sulfonamide composition.

SULFOSE *contains sulfadiazine, sulfamerazine and sulfamethazine suspended in a unique, flavored vehicle containing a special alumina gel.*

- Unusually palatable
- Stabilized suspension—won't separate
- Easy to measure—pours freely

Each teaspoonful (5 cc.) contains 0.5 Gm. total sulfonamides—0.167 Gm. each of sulfadiazine, sulfamerazine and sulfamethazine.

SUPPLIED in bottles of 1 pint.

SULFOSE®

TRIPLE SULFONAMIDE SUSPENSION

Wyeth®

Wyeth Incorporated, Philadelphia, Pa.

When the diagnosis is Pyelitis

First: consider



ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION

to establish and maintain urinary antisepsis...

To establish and maintain urinary antisepsis, MANDELAMINE* is many times preferred because it is quickly effective against the organisms most commonly encountered in urinary-tract infections. Its exceptional freedom from untoward reactions and its wide range of antibacterial activity commend it for use as soon as the diagnosis has been made.

Urinary antisepsis is often achieved in uncomplicated pyelitis in as few as three days. Speedy recovery is thus secured in many cases without necessitating higher-cost therapy.

Renal insufficiency is the only major contraindication to MANDELAMINE therapy.

MANDELAMINE is available in bottles of 120, 500, and 1,000 enteric-coated tablets, through all prescription pharmacies. Comprehensive literature and samples for clinical trial will be furnished to physicians on request.

NEPERA

NEPERA CHEMICAL CO., INC.
Pharmaceutical Manufacturers
NEPERA PARK, YONKERS 2, N. Y.

*MANDELAMINE is the registered trademark of Nepera Chemical Co., Inc., for its brand of methenamine mandelate.

for rapid response in the pneumonias

Chloromycetin®

lobar pneumonia with bacteremia

"After initiation of Chloromycetin therapy the temperature returned to normal within forty-eight hours, and prompt subsidence of the cough and chest pain occurred."[1]

bronchopneumonia

"Clinically, the child improved rapidly and was out of the oxygen tent in 24 hours and afebrile in 36 hours."[2]

primary atypical (virus) pneumonia

"On the first evening of Chloromycetin treatment the subjective symptoms were less severe, and within 24 hours his fever began to settle."[3]

Chloromycetin is effective against practically all pneumonia-causing organisms. Response is strikingly rapid, temperature drops, the lungs clear . . . and your patient is convalescent.

Chloromycetin is unusually well tolerated. Side effects are rare, severe reactions almost unknown.

Bibliography (1) Hewitt, W. L., and Williams, Jr., B.: New England J. Med. *242*:119, 1950. (2) Recinos, Jr., A.; Ross, S.; Olshaker, B., and Twible, E.: New England J. Med. *241*:733, 1949. (3) Wood, E. J.: Lancet 2:55, 1949.

98.6

Chloromycetin (chloramphenicol, Parke-Davis) is supplied in Kapseals® of 250 mg., and in capsules of 50 mg.

PARKE, DAVIS & COMPANY

COME AND GET IT!



A new formula

for nourishment!

Delicious!

Concentrated!

Delmor®

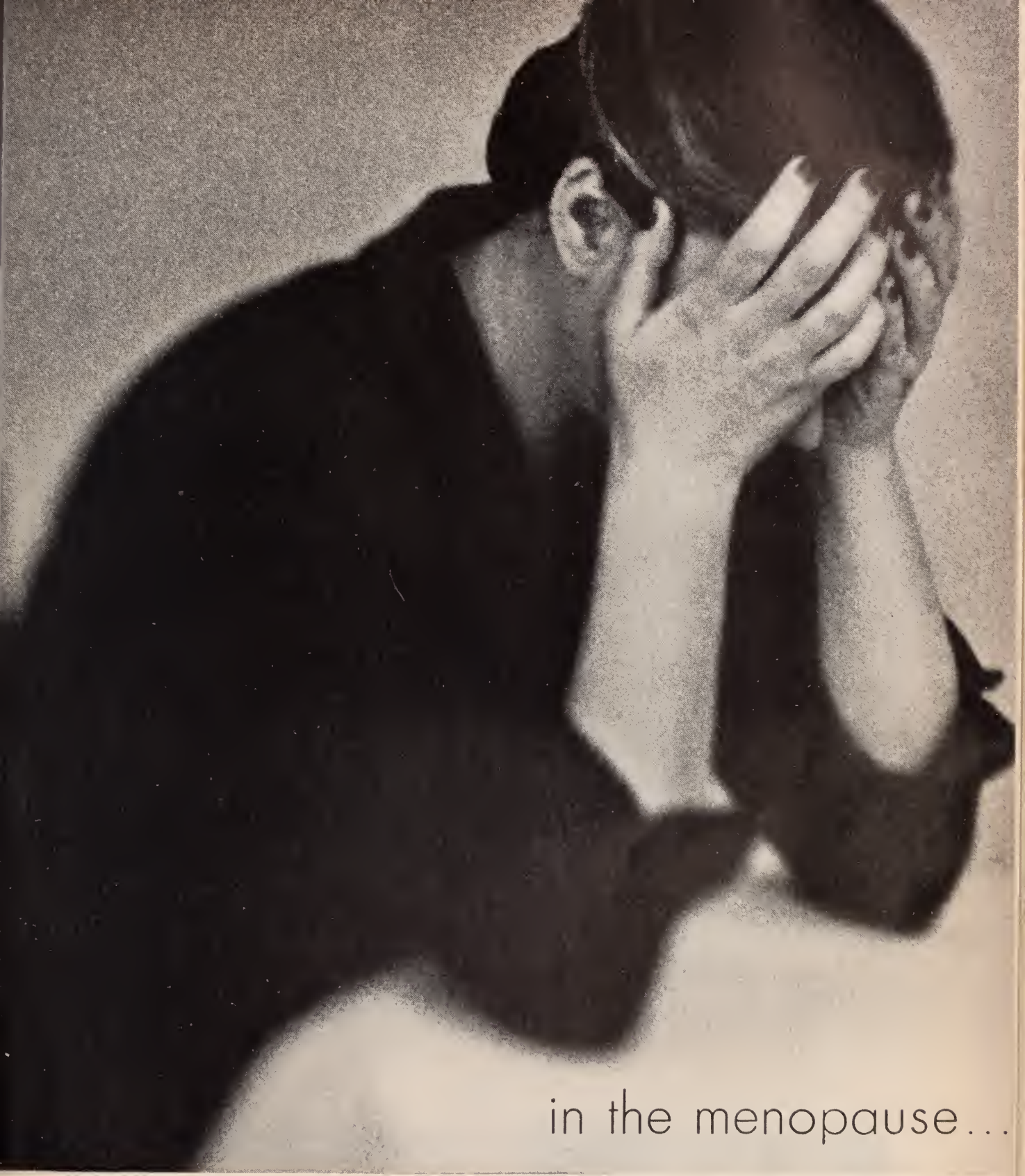
nutrient powder

SHARP & DOHME

Each 100 Gm. of DELMOR® contains:

PROTEIN	(N x 6.25) derived from milk and soybean	50 Gm.
CARBOHYDRATE	derived from cane, milk and grain sugars and soybean	20 Gm.
MINERALS	Calcium	600 mg.
	Phosphorus	440 mg.
	Iron	15 mg.
VITAMINS	Thiamine HCl (vitamin B_1)	10 mg.
	Riboflavin (vitamin B_2)	10 mg.
	Pyridoxine HCl (vitamin B_6)	1 mg.
	Calcium pantothenate	5 mg.
	Niacinamide	100 mg.
	Ascorbic acid (vitamin C)	100 mg.
	Vitamin A	4,000 U.S.P. units
	Vitamin D	400 U.S.P. units
LIVER	Whole liver substance, together with other natural factors of the vitamin B complex, including vitamin B_{12}	1 Gm.

DELMOR is a new and exceptionally useful formula for supplementing presurgical, obstetric, or convalescent diets with highest quality whole protein and other essential nutrients. A deliciously flavored powder, DELMOR may be given cooked or uncooked, with any kind of food, or between meals. Supplied in 1-lb. and 5-lb. bottles. Literature and recipes on request. Sharp & Dohme, Philadelphia 1, Pa.



in the menopause...

"all patients described a sense of well-being [with 'Premarin']."

Neustaedter, T. Am. J. Obst. & Gynec. 46:530 (Oct.) 1943

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

"PREMARIN"®

estrogenic substances (water-soluble)
also known as conjugated estrogens (equine)

highly effective · orally active · well tolerated · imparts a feeling of well-being

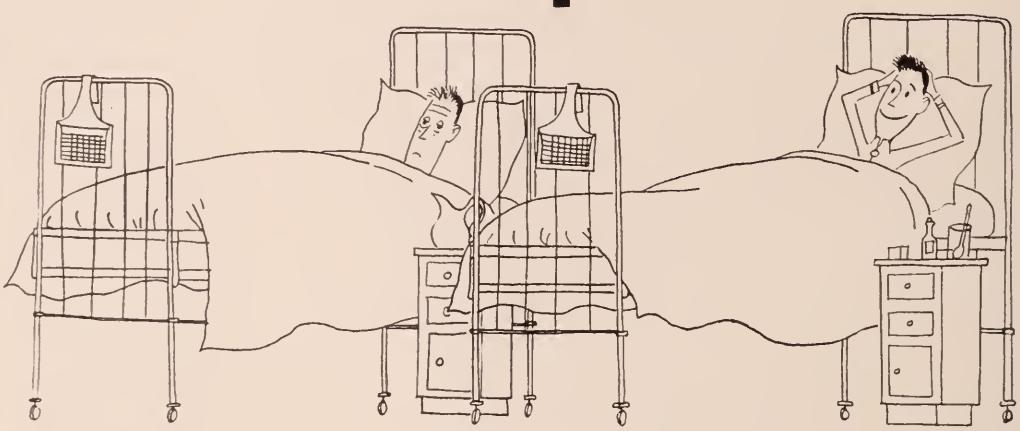
Ayerst, McKenna & Harrison Limited · 22 East 40th Street, New York 16, New York

in convalescence . . .

Theptine

makes a

big difference



In convalescence a return to normal health is frequently retarded by two barriers: mental depression and nutritional depletion. In such cases 'Theptine' has proved to be an ideal preparation to help speed recovery.

'Theptine' supplies, in a light and pleasing elixir, the unique antidepressant action of 'Dexedrine' Sulfate *plus* the nutritional action of thiamine, niacin and riboflavin. 'Theptine' improves both the mental and physical tone of the patient . . . helps speed his return to normal life and living. ***Smith, Kline & French Laboratories, Philadelphia***

Each 5 cc. (1 teaspoonful) contains:

'Dexedrine' Sulfate (dextro-amphetamine sulfate, S.K.F.)	2.5 mg.
Thiamine hydrochloride	5.0 mg.
Riboflavin	0.45 mg.
Niacin	6.7 mg.

Theptine

Available in 12 fl. oz. bottles.

'Dexedrine' plus essential B vitamins

an antidepressant and nutrient elixir

'Theptine' & 'Dexedrine' are S.K.F. Trademarks

Vasoconstriction
combined with
antibiotic therapy in

NEO-SYNEPHRINE

(brand of phenylephrine)

with

CRYSTALLINE PENICILLIN



In upper respiratory tract infections, topical application of penicillin to the nasal cavity has a decided bacteriostatic action against typical respiratory pathogenic microorganisms.

To provide clear passage for such therapy, Neo-Synephrine is combined with penicillin—shrinking engorged mucous membranes and allowing free access of the antibiotic.

Neo-Synephrine—a potent vasoconstrictor—does not lose its effectiveness on repeated application . . . is notable for relative freedom from sting and absence of compensatory congestion.

NEO-SYNEPHRINE®
with
CRYSTALLINE PENICILLIN

Stable • Full Potency

Supplied in combination package for preparing 10 cc. of a fresh buffered solution containing Neo-Synephrine hydrochloride 0.25% and Penicillin 5000 units per cc.

Winthrop-Stearns INC.
NEW YORK 13, N. Y. WINDSOR, ONT.

Neo-Synephrine, trademark reg. U. S. & Canada

"...the only drug we have seen that allays anxiety without clouding consciousness"

J.A.M.A. *140*:672 (June 25) 1949



Tolserol *(Squibb Mephenesin)*

- to alleviate pronounced anxiety and tension
- as an adjunct in the treatment of chronic alcoholics

DOSAGE

In anxiety tension states:

As little as 0.5 Gm., given orally every few hours, has produced a good response. However, for optimum effect, 0.75 Gm. or more is given several times a day.

As an adjunct in the treatment of chronic alcoholics:

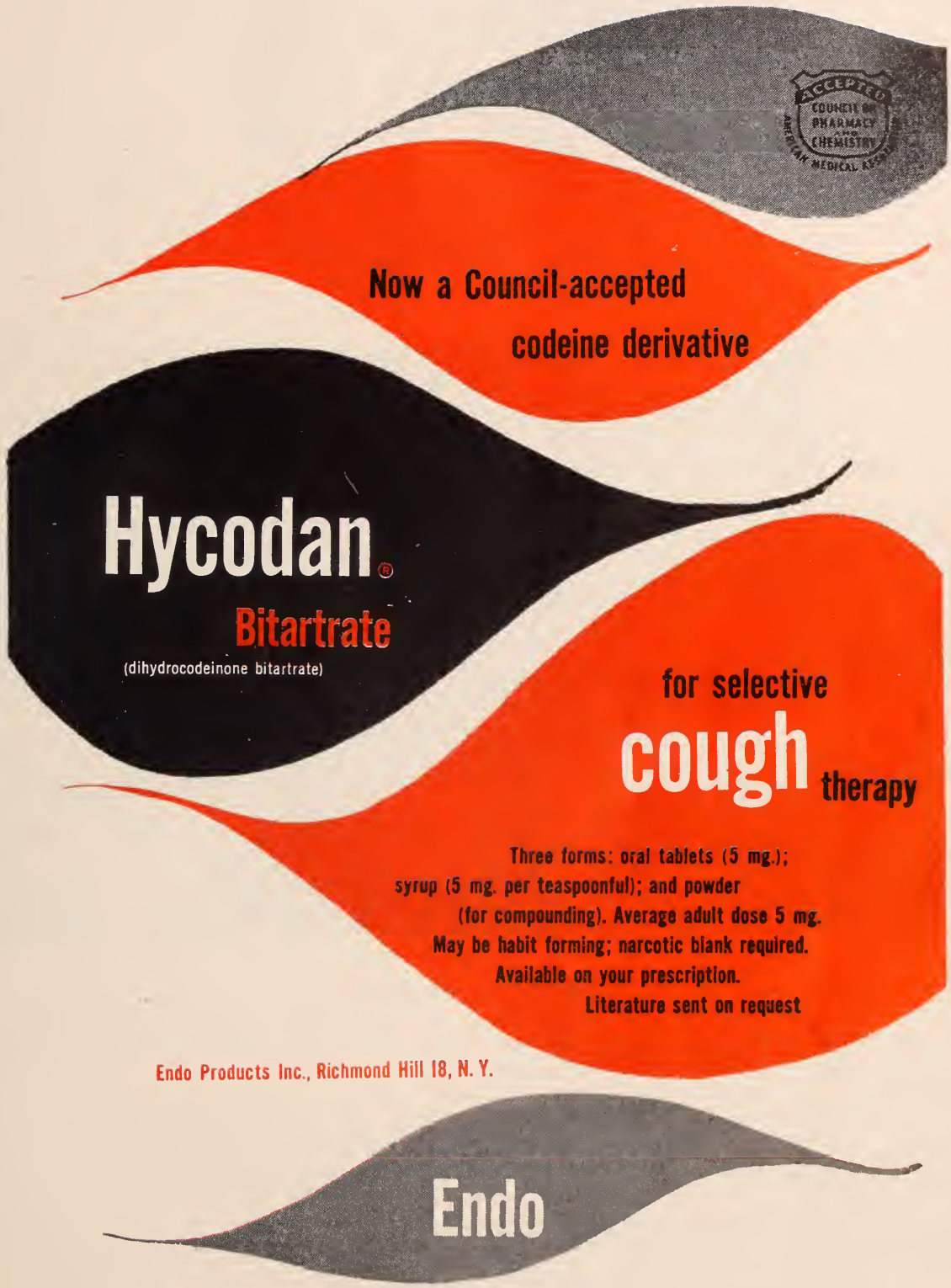
As much as 3 Gm. orally every four hours has been found useful in the acute stage. This dosage is reduced when the patient becomes more manageable. (If Tolserol is given too soon after the patient drank alcohol, the toxic effect of the alcohol may be potentiated. For this reason, Tolserol should not be administered until six hours have elapsed since the patient drank alcohol.)

Tablets, 0.5 Gm., 0.25 Gm.; *Capsules*, 0.25 Gm.; *Elixir*, 0.1 Gm. per cc.; *Solution*, 2% (intravenous).

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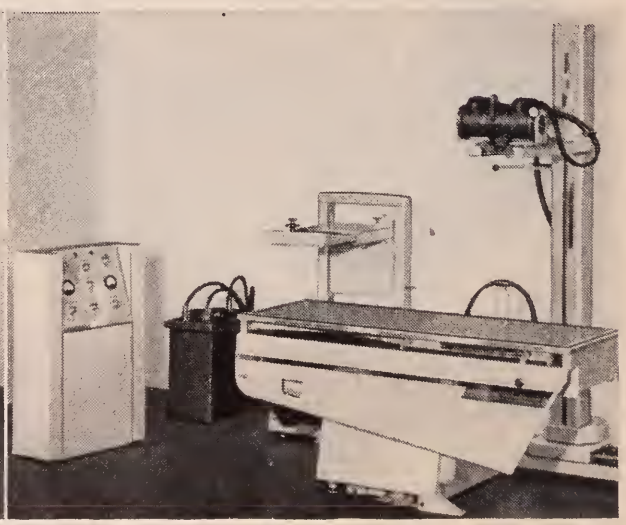
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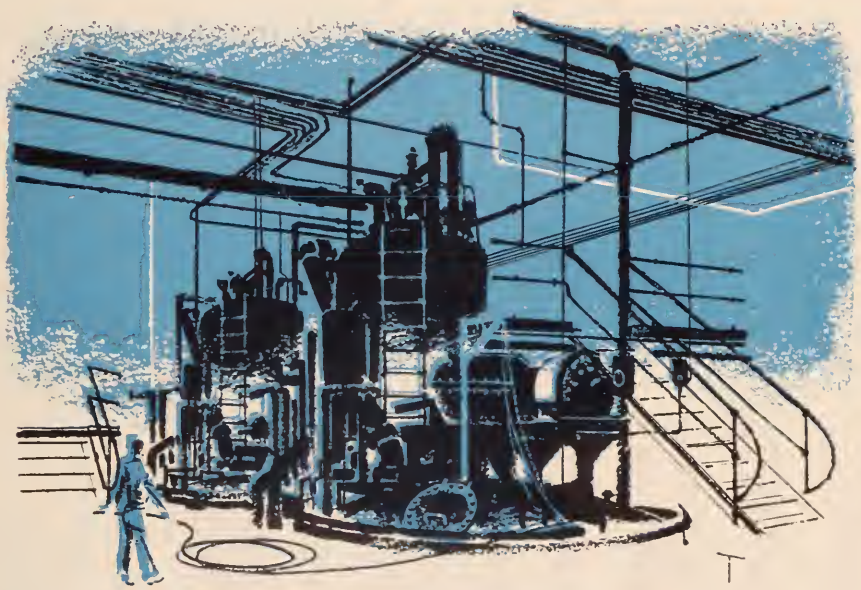
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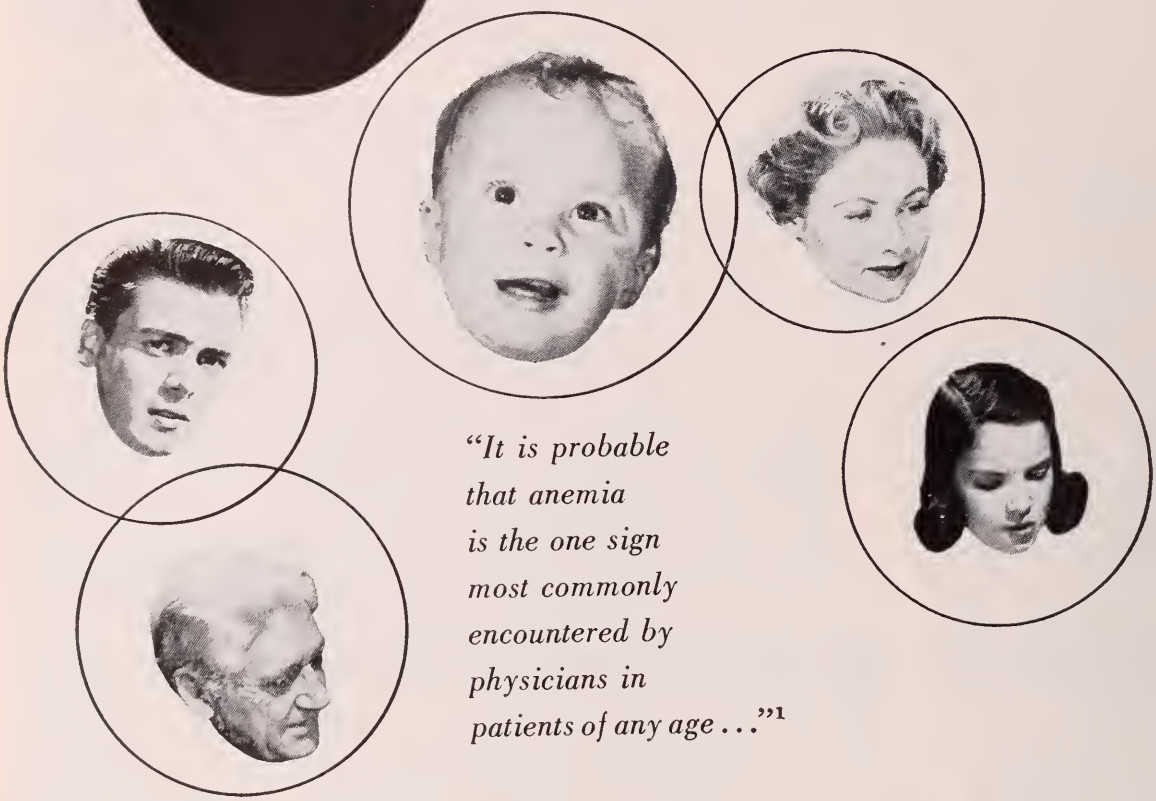
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Niacinamide†	24.0	mg
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Package Information

HEMOSULES* 'Warner,' hematinic capsules, are available in bottles of 96, 250, and 1,000.

References

1. Doan, C.A. and Wright, C.S., The Anemic States: Their Causes and Treatment, *Med. Clin. N. Amer.*, (March) 1949, p. 541.

2. Kracke, R.R., *Diseases of the Blood and Atlas of Hematology*, J. P. Lippincott Co., Phila., 2nd ed., 1941, p. 202.

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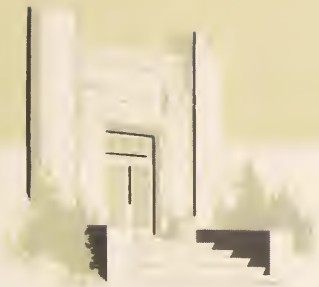
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Official Journal of the Illinois State Medical Society

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THE GRIEVANCE COMMITTEE

At the 1950 annual meeting of the Illinois State Medical Society, the House of Delegates amended the By-laws to provide a Grievance Committee, and the following changes were made.

Under Chapter IX Committees, a Grievance Committee was added. Section 8; The Grievance Committee shall consist of six members, two of whom shall be elected each year by the House of Delegates to serve for a term of three years. At the first election held under this By-Law, two members shall be elected to serve one year, two for two years and two for three years. The functions of the Grievance Committee shall be: (1) To cooperate with the Grievance Committees of component societies, where such committees exist, in the effort to adjust differences between members of the Society and the Public. (2) To act for the Society in investigating complaints and/or initiating investigations concerning professional conduct and ethical deportment, in those counties which do not have a Grievance Committee.

In conducting such hearings at least two members of the Committee shall be assigned to conduct impartial hearings. At such hearings members of the Society may be ordered to appear and lay complainants may be invited to appear, if deemed necessary. The investigating members should attempt, through advice and counsel, to settle minor complaints and differences of opinion in the interest if improving public relations. If in the opinion of the investigators, fees have been excessive, they may suggest that the offending physician make some satisfactory adjustment, and may warn the individual that repetition of the offense may result in disciplinary prosecution with the Society.

If, after full investigation, the committee feels that evidence warrants, it may prefer charges of unethical conduct against the offender before the Ethical Relations Committee of the component Society to which he belongs.

(3) The Committee does not have the power to try a member or to impose discipline. It can investigate; it can advise; and it can prosecute. (4) The Committee shall report to the House of Delegates at the Annual Meeting.

At the meeting of the House of Delegates last May, when the amendments to the By-Laws were made to provide a Grievance Committee, it was agreed that the first Committee shall consist of the six immediate past presidents, they to draw lots to determine which shall be elected for one, two and three years respectively. Then they should meet, and select their own chairman. The committee at its first meeting selected Walter Stevenson, Quincy, as the first chairman.

All county medical societies which have not already done so, should have a Grievance Committee to assume responsibilities at the county level. If the county committee is either unwilling, or unable to arrive at a satisfactory conclusion, the matter may then be referred to the State Society Grievance Committee for final action. Several component Societies, including the large Chicago Medical Society, has had a Grievance Committee over a period of years, and complaints have been received and acted upon promptly and satisfactorily.

Fortunately, there have been only a few complaints submitted in Illinois for over-charging on the part of members of the State Medical Society. The public relations damage is greater in one authentic over-charge than can be offset by 100 instances where physicians have gone out of their way to help worthy but needy patients.

The subject of Grievance Committees and their functions was thoroughly discussed at the recent Third Annual Medical Public Relations Conference held in Cleveland, and all state and county societies were urged to have such committees functioning at the earliest possible moment.

The medical profession has many times in recent years been accused of failing to discipline members whose actions were alleged to be unethical. Through a properly functioning Grievance Committee, when complaints are received from laymen, they should be investigated by an impartial committee, and efforts should be made to settle the grievance. Many times in these investigations it has been found that the complaint was not made until efforts were made by the attending physician to collect his bill. These Committees have in many instances succeeded in showing the complainant that there was no justifiable basis for the complaint, and the matter was dropped, with the former patient satisfied that a careful investigation of the charges had been made.

This is good medical public relations, and it is hoped that all component societies in Illinois will set up its own grievance committee in the near future. In the meantime, when complaints are received, it is recommended that they be referred either to the office of the State Society Secretary, or directly to the State Society Grievance Committee for its consideration.

THE VALUE OF PERITONEOSCOPY

"For now we see through a glass, darkly". I Corinthians.

The diagnosis of disease within the abdominal and pelvic cavities is dependent mainly on palpation. It is true that inspection, percussion, and even auscultation, are at times of value and of course rectal examination and the history are not infrequently important. But, when all is said and done, abdominal diagnosis is often a more or less blind procedure.

The use of the trochar for removal of ascitic fluid goes back at least to the thirteenth century when Mundinus described it. The physicians of that era no doubt learned to draw some conclusions from the nature of the ascitic fluid, but with the perfection of the incandescent light by Edison and the invention of the cystoscope and other comparable visional instruments, it was only a question of time before someone, in this case John Ruddock, devised a method of inspecting the interior of the abdominal and pelvic cavities combined with the means of removing tissue for biopsy.

It usually takes some years to evaluate a device of this sort and to appreciate its defects and hazards. As to the former, it is obvious that when extensive abdominal adhesions are present, usually in about 5 per cent of prospective examinees, the peritoneoscope cannot be used. As to hazards, it may truly be said that fatal accidents are quite rare and may be due to the contemporaneous removal of tissue or to the nature of the disease investigated rather than to the manipulations associated with visualization. This was true of the one fatal accident among the 392 patients examined by Anderson and his associates.[1] It should be noted that the accident was a hemorrhage from the liver and, inasmuch as diseases of this organ may produce defects in the clotting mechanism of the blood, it is advisable to avoid liver biopsy unless the hemic prothrombin level has been tested before the peritoneoscopy and is practically normal.

As to the examination itself and its indications it is suggested that any patient with ascites of dubious etiology should be peritoneoscoped at least once unless there is some definite contraindication. Anesthetization with pentothal sodium,

[1]Anderson, Dockerty and Waugh; Proc. Staff Meetings Mayo Clinic, 1950, 25, 601.

supplemented with oxygen and occasionally with nitrous oxide was employed by the Anderson group and had the effect of facilitating the examination as well as giving comfort to the patient.

The most accurate results were attained in the diagnosis of neoplasms of the peritoneal cavity of which 94 per cent were correctly diagnosed. The diagnosis of hepatic disease was less accurate. The procedure was not recommended in known cases of gastric and ovarian malignancy to determine operability. The addition of biopsy to mere inspection measurably increased the value of the procedure. It would seem that in peritoneoscopy we have a valuable aid to the detection of the cause of ascites of unknown etiology which, in the hands of experts, is associated with but little risk to the patient and definitely improves diagnostic accuracy.

George Blumer M.D.

SOCIALISM OR BANANAS AND RICE?

"So far as the rule could be carried out, I used to exact from my native patients some tangible evidence of their gratitude for the help they had received. Again and again I used to remind them that they enjoyed the blessing of the hospital because so many people in Europe had made sacrifices to provide it; it was, therefore, now on their part a duty to give all the help they could to keep it going. Thus I gradually got it established as a custom that in return for the medicine given I received gifts of money, bananas, poultry or eggs. What thus came in was, of course, far below the value of what had been received, but it was a contribution to the upkeep of the hospital. With the bananas I could feed the sick whose provisions had given out, and with the money I could buy rice, if the supply of bananas failed. I also thought that the natives would value the hospital more if they had to contribute to its maintenance themselves according to their ability, than if they simply got everything for nothing. In this opinion about the educational value of the exaction of a gift I have been only strengthened by later experience. Of course no gift was exacted from the very poor and the old — and among the primitives age always connates proverty,"[1]

This paragraph was written twenty years ago by one of the truly great men of our time: Albert Schweitzer, musician, philosopher, theologian, author and doctor of medicine, who left a brilliant career in Europe to become a medical missionary in Africa, and founded a hospital in Lambarene on the edge of the primitive jungle. Those attending the Goethe festival at Aspen, Colorado, last summer will not soon forget his striking presence. In addition to his other gifts, Dr. Schweitzer is a close observer of human nature, and it did not take him long to observe that his native patients valued their medical care more when it was received on a fee-for-service basis, in contrast to their ingratitude when their medical care was free. The analogy to socialized medicine is all too clear.

This incident serves to illustrate one of the fundamental faults of any socialist giveaway program, that is that people simply do not value that which they receive for nothing; and this applies to Socialist programs in general as well as to socialized medicine. This ingratitude, or failure of appreciation, or whatever you may call it, probably was a factor in the public repudiation at the polls of the greatest give away program in the history of the world.

However, we must not wait for the socialism of our present administration to fall of its own weight and indeed we have not done so. We may congratulate ourselves as a profession that our efforts had some influence in the recent election, and we must continue to do all in our power to see that the public is informed. We are in politics and we must stay in politics if we wish our American way of life to continue.

J. C. S.

[1]Schweitzer, Albert. Out of My Life and Thought: An Autobiography. Translated by C. T. Campion. Postscript 1932-1949 by Everett Skillings. New York: Henry Holt and Company, 3rd Printing, August 1949.

In various forms — whether poliomyelitis, tuberculosis, cardiovascular disease, diabetes or any of the other abnormalities that are likely to alter a patient's social and economic activiies — these chronic conditions account for three fourths of all illness today. Progressive control of infectious diseases and the increasing number of elderly people in the population are bringing about a situation in which the chronic illnesses and preventive medicine may in the future demand the entire attention of physicians. Ediorial, New England J. Med., August 10, 1950.

SOCIALIZED MEDICINE IS NO BARGAIN

William L. Hutcheson,
General President, United Brotherhood of Carpenters & Joiners of America and Vice President of the American Federation of Labor

I am against socialized medicine. So is the organization which I have the honor of heading. At the Twenty-sixth General Convention of the United Brotherhood of Carpenters and Joiners of America, held in Cincinnati last September 1, 300 delegates, representing better than 54 per cent of the total membership, voted down a resolution to support the National Health Program. This probably does not jibe with the feelings of a good deal of the rest of the labor movement because much of the pressure for "free" medical care is coming from labor organizations. But it does reflect my sentiments and the sentiments of our recent convention.

Saving a dollar has never been distasteful to me. In fact I like to get as much for my money as the next man. That is one of the reasons why I oppose socialized medicine. It is no bargain. It looks cheap the way the backers present it, but when you dig down under the fancy layer of propaganda frosting you find that it can be mighty expensive. The British people have already discovered this fact. The July issue of International Labor Office, contains some very interesting data on the operation of the National Health Service in Britain. I quote a few lines of that report:

"The total (gross) cost of the National Health Service in 1948-1949, the first year of operation, greatly exceeded the original estimate. This was 265 million pounds, as against a revised estimate of 368 million pounds, with a net cost to the taxpayer of 278 million pounds. The revised estimate for the year 1949-1950 was 450 million pounds as against an original estimate of 352 million pounds. For the 1950-1951, the cost is estimated at 484 million pounds; in 1946 when the Bill was passed, the service was believed to cost 167 million pounds a year."

In case you don't understand what the International Labor Office is, I can best explain its functions by quoting a bit from its preamble:

"The International Labor Office is an association of nations, financed by Governments and democratically controlled by representatives of Governments, of management and of Labour organizations.

"Its purpose is to promote social justice in all countries of the world. To this end it collects facts about labour and social conditions, formulates minimum international standards, and supervises their national application."

The I. L. O.'s publication, "International Labour Review", is published in the United Kingdom. As an international organization, I. L. O.'s findings are supposed to be strictly impartial.

Getting back to the report; if I read it correctly, service that was supposed to cost 167 million pounds per year when the plan was set up in 1946 costs 484 million pounds per year, and the end is not yet in sight. By my old-fashioned kind of arithmetic that is an increase of better than 345 per cent and I am sure my poor old mother, who always made a dime do the work of a quarter, would not consider that kind of proposition any bargain.

I know! I know! The socialists claim that money is of no consequence in the matter of national health; — getting the poor the same quality and quantity of medical care as the rich can get under private enterprise is the advertised objective of the National Health Program. That sounds fine, too; but on Page 57 of the I. L. O. report, I find the following sentences:

"Survey of the distribution of doctors by boroughs shows that certain wealthier districts (of London) have an average of one doctor for 1,261 patients, while in the inner East End there are 2,472, or twice as many patients, per doctor. For a group of southern boroughs, the average is 2,897."

If that isn't the "one horse and one rabbit" recipe transferred from the meat pie maker's kitchen to the National Health program, then I need new reading glasses. I have tried to figure it from all angles but the answer I always come up with is that the lumbago, shingles and bellyaches of London's South Siders get only half the attention that similar ailments get in the swankier districts. For all the planning that has been done, there is still an uneven distribution of doctors in London. If the backers

Prepared for Delivery at a Joint Session of the House of Delegates of the American Medical Association and the Third Annual Conference of the A.M.A. National Education Campaign, Cleveland, Ohio, December 7, 1950

of the National Health Program are to achieve their objective of equal health protection for all, the next step must be to tell doctors when and where and how they are to practice. Therein lies my greatest fear of socialization.

Socialization and death have one thing in common; you cannot be either a little bit socialized or a little bit dead. It is whole hog or nothing. After two years of the National Health Program, London doctors still have preferences as to where they want to practice. By compulsion of one kind or another, somebody is going to have to shoo doctors away from the fancy neighborhoods into the tenement districts or the program will wind up where it started. When the government is given authority to tell one group or one profession where and how its members are to work, no other group or profession can be safe for long.

If the day ever comes to America when Uncle Sam usurps the power to dictate to doctors under a health plan, it will be a sad day for carpenters. Adequate housing is still an unsolved problem in this country, especially for the poor. If it is logical to nationalize the medical profession to get more medical service for the poor, it is equally logical to nationalize the home construction industry to get roofs over the heads of the lower income groups.

I do not know much about doctors, but I know quite a bit about carpenters. They are an independent lot. They want to work where and how they please. The first bureaucrat who told a carpenter he had to work in Little Rock when he wanted to work in Lancaster would be gumming his food for lack of teeth. Carpenters want to be free agents; free to work where they want to; free to negotiate the terms of their wages and working conditions through collective bargaining; yes, even free to leave the industry and try their luck at something else if the spirit moves them.

They will retain these freedoms only so long as all other groups retain theirs. Socialization is like a wolf with a tapeworm; once it starts gnawing, it never can stop. Socialized medicine would only be the first bite out of our free enterprise system; it would not be many years before the carpenters would be feeling the teeth of socialization on the seats of their overalls. Any way you look at it, socialized medicine is no bargain and the carpenters want none of it.

I know that the backers of the national health plan in this country resent the term "socialized medicine". They have all sorts of arguments to "prove" that doctors and patients will remain free as the air under their program. They make a strong case. Perhaps if human nature were less ornery and less avaricious, an idealistic health program might work out all right. But so long as people have preferences, so long as Park Avenue has more appeal than Hell's Kitchen, there will be an uneven distribution of doctors under any plan that does not contain compulsion. And once compulsion enters the picture, the rights and freedoms of all citizens stand in jeopardy. To me, it is as simple as that. For forty years, I have fought communism tooth and toenail because I do not want anyone pushing me around. I certainly do not want to put my head into a socialization noose voluntarily when the results can be as undesirable as communism.

I have always respected the medical profession for the fine contribution American medicine has made to human welfare. As I watched your battle against regimentation during the past two years, I have added to that respect. The physicians of this country have shown that they are willing to fight for their conviction. I salute you today not only as doctors but as crusading citizens as well. We in the labor movement have our own cross of regimentation to bear. The fight you are making is part of the same war. It is a war against concentration of authority in a few hands in Washington. As a veteran of forty years in the labor movement, I know what it is to fight for human rights. I am happy to take my stand beside you.

CORRESPONDENCE



RADIATION PHYSICS

The Graduate Division of Northwestern University Medical School announces a course in radiation physics. As a consequence of popular demand, the course will be opened to registration for all interested physicians.

Days and dates: Every Monday, January 8, 1951 through April 23, 1951. Every day, April 30, 1951 through May 5, 1951.

Time: 7:00 P.M. to 9:00 P.M.

Place: Gilmer Hall, Room 1276, Ward Memorial Building, 303 East Chicago Avenue, Chicago, Illinois (Northwestern University Medical School).

Fees: Residents in any specialty $10.00
Practicing and other physicians $25.00

Application: Send application with proper remittance to Doctor Gordon Raleigh, Room 492, Ward Building, 303 East Chicago Avenue, Chicago, Illinois. Remittance should be in cash, check, or money order payable to Northwestern University. A receipt-ticket will be returned to the applicant and must be presented for admission to each session.

Monday, January 8, 1951
Radiation Physics, Robert Landauer, Ph.D. Q
Associate in Radiology (Physics), Northwestern University Medical School, Diplomate of the American Board of Radiology in Physics.

Monday, January 15, 1951
Radiation Physics, Dr. Landauer

Monday, January 22, 1951
Therapy Equipment, E. Dale Trout, Sc.D.
Assistant to the Vice-President and Technical Consultant in Therapeutic Equipment, General Electric X-ray Corporation.

Monday, January 29, 1951
Diagnostic Equipment, John Thomas
Technical Consultant in Diagnostic Equipment, General Electric X-ray Corporation.

Monday, February 5, 1951
Dark Room Chemistry and Physics, Arthur Fuchs
Education Department, the Eastman Kodak Company.

Monday, February 12, 19, 26, 1951
Radiation Physics, Dr. Landauer

Monday, March 5, 1951
Radiation Physics, Dr. Landauer

Monday, March 12, 1951
Radiation Therapy, Anna Hamann, M.D.
Assistant Professor of Radiology, Northwestern University Medical School. Director, the Department of Radiation Therapy, Evanston Hospital.

Monday, March 19, 26, 1951
Radiation Physics, Dr. Landauer

Monday, April 2, 9, 16 23 1951
Radiation Physics, Dr. Landauer

Monday, April 2, 9, 16, 23, 1951
Radiation Physics, Dr. Landauer

Monday, April 30, 1951
Radio-active Isotopes in Biology and Medicine, Edith H. Quimby, Sc.D.
Associate Professor of Radiology (Physics), College of Physicians and Surgeons, Columbia University, New York. It is considered a singular privilege and honor for Northwestern University Medical School in presenting this distinguished guest speaker.

Tuesday, May 1, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Wednesday, May 2, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Thursday, May 3, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Friday, May 4, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Saturday, May 5, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby

CLINICS FOR CRIPPLED CHILDREN LISTED FOR FEBRUARY

Doctor Herbert R. Kobes, director of the University of Illinois Division of Services for Crippled Children, has released the February schedule of clinics for physically handicapped children. The Division will conduct 15 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical, social and nursing services. There will be 4 special clinics for children with rheumatic fever and 1 for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations and groups, hospitals, civic and fraternal clubs, and other interested groups. From private physicians, who are certified Board members, are selected the clinicians. Any private physician may refer or bring to a convenient clinic any child or children for whom he may want examination or may want to receive consultative services:

The February clinics are:

February 6—Vandalia, American Legion Home
February 7—Elgin, Sherman Hospital
February 8—Chester, St. John's Lutheran School
February 8—Springfield, St. John's Hospital
February 8—Elmhurst (Rheumatic Fever), Memorial Hospital of DuPage County
February 9—Chicago Heights (Rheumatic Fever), St. James Hospital
February 13—Peoria, St. Francis Hospital
February 13—E. St. Louis, Christian Welfare
February 14—Hinsdale, Hinsdale Sanitarium
February 15—Rockford, St. Anthony's Hospital
February 15—Litchfield, St. Francis Hospital
February 20—Carrollton, Grade School
February 21—Chicago Heights, St. James Hospital
February 22—Tuscola, Armory
February 22—Normal, Brokaw Hospital
February 23—Chicago Heights (Rheumatic Fever), St. James Hospital
February 27—Peoria, St. Francis Hospital
February 27—Effingham (Rheumatic Fever), Douglas Township Bldg.
February 28—Springfield (Cerebral Palsy), Memorial Hospital
February 28-Aurora, Copley Hospital

COMMISSION ON CHRONIC ILLNESS

A national conference has been called to explore ways of *preventing* chronic disease, announced Morton L. Levin, M.D., Staff Director of the new Commission on Chronic Illness*.

Attacking chronic disease — the nation's Number 1 health problem — at its roots through *prevention* the Commission has scheduled a Conference on Chronic Disease: Preventive Aspects to be held in Chicago, March 12-14, 1951.

Co-sponsors of the national Conference on preventive aspects are the National Health Council and the U. S. Public Health Service.

Discussions of this "working conference" will be based on authoritative summaries of present day scientific knowledge regarding prevention and early detection of major chronic diseases including: cancer; heart disease; arthritis and rheumatism; neuro-muscular disorders, including poliomyelitis, multiple sclerosis, cerebral palsy, and epilepsy; diabetes; blindness; deafness; tuberculosis and syphilis, said Dr. Levin.

Emotional factors in chronic disease; malnutrition including obesity as a cause, heredity in chronic disease, and occupational causes of chronic disease will also be considered, he said.

Practical application of this existing knowledge to community detection and prevention programs will be considered by the conferees.

*An independent national agency founded jointly by the American Hospital Association, American Medical Association, American Public Health Association, American Public Welfare Association.

MISSISSIPPI VALLEY ESSAY CONTEST

The Eleventh Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1951. The Society will offer a eash prize of $100.00, a gold medal, and a certifieate of award for the best unpublished essay on any subjeet of general medical interest (ineluding medical economies and education) and praetieal value to the general practitioner of medieine. Certifieates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medieal Association who are residents and eitizens of the United States. The winner will be invited to present his eontribution before the meeting of the Soeiety to be held in Peoria, Ill., Sept. 19, 20, 21, 1951, the Society reserving the exclusive right to first publish the essay in its offieial publieation. All contributions shall be typewritten in English in manuscript form, submitted in five eopies, not to exeeed 5000 words, and must be reeeived not later than May 1, 1951. The winning essays in the 1950 eontest appear in the January 1951 issue of the Mississippi Valley Medieal Journal.

Further details may be secured from Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Illinois.

"YOUR MENTAL HOSPITALS" — PSYCHIATRIC AID IN CRIMINAL CASES

Assistance in the diagnosis and differentiations of psychiatric problems in criminal cases has been rendered by the Illinois Department of Publie Welfare for a number of years. At present, these activities are carried on by the staff of the Division of Medieal Care and Treatment, supplemented by a panel of consultant psychiatrists.

Whenever the question of insanity comes before the Court, a jury is impanelled to pass on the sanity plea. In order to help determine this, the Division of Medical Care and Treatment offers its services to the Courts so that expert psychiatric opinion can be obtained relevant to the issues involved.

By recent legislative enactment in the State of Illinois, the term "insanity" is used only in criminal cases. In civil cases, the term "mentally ill" is used. The civil cases are admitted to the public and private mental hospitals under the Illinois Revised Mental Health Aet. There are three types of Commitments under the Criminal Code:

1. *Individuals charged with a felony* on whom a plea of insanity is made.
   The test for insanity varies depending upon whether insanity is considered to be present:
   a. at time of commission of the erime,
   b. before the trial,
   e. before judgment.
2. *The Criminal Sexual Psychopath*
   (Illinois Revised Statutes, Chapter 38, Sec. 820-825)
3. *The Criminal Sexual Psychopaths upon expiration of their penitentiary sentences.*
   (Illinois Revised Statutes, Chapter 108, Sec. 112)

A working knowledge of the Revised Mental Health Aet, the Mental Deficieney Act, and Commitments under the Criminal Code is required by those working in this field. Phychiatric consultations to the Courts are available throughout the various counties of the State of Illinois. In this manner, the Illinois Welfare Department eontinues to render serviee to all concerned, in determining the responsibility of the defendant as well as making recommendations toward the disposition of the alleged insane person presented before the Courts.

George A. Wiltrakis, M.D.
Deputy Director

NATIONAL CONFERENCE ON MEDICAL SERVICE

The twenty-fourth annual meeting of the National Conference on Medical Services will be held Sunday, February 11, 1951, in the Red Lacqner room of the Palmer House in Chicago. We would very much appreciate your publishing this preliminary announcement of the meeting at the earliest possible date.

The meeting is of special importance to presidents, secretaries, and public relations personnel of state and county medical societies.

Robert E. Fitzgerald, M.D.
Secretary, National Council
on Medical Service

YOU, YOUR COLLECTOR, AND YOUR COLLEAGUES

You make patients better, but your collector makes better patients.

Every unpaid fee that your collector recovers makes a better patient out of the person from whom he collected. Most of the fees you carry on your books are not there because your patients are experiencing genuine financial strain. They are unpaid because a colleague who preceded you as the patient's doctor failed to take steps to collect his fee. And the patient who finds it inconvenient, but not impossible, to pay you remembers that the other doctor forgot about his bill; and hopes that you, too, will tire of sending statements. Even those who never owed a doctor share the universal knowledge that doctors wait, and even forget about bills.

So payment of your fee often depends on what other doctors did about their fees, and the fees now due these other doctors depend on what you did in the past about unpaid fees which were then due you.

When your collector recovers a fee for you, the patient has then and there learned that you must be promptly paid in the future; and so must the other doctors who treat him. That is the combined contribution that you and your collector make to your colleagues. When your local collector makes a collection for another doctor, they in turn have combined to make a better patient for you.

To make this reciprocal movement continental in scope, the best collection organizations in every community, including a number of Chicago organizations, have joined to form the American Collectors Association. Participating collectors are able to refer accounts to whichever city your patient may have moved; and somebody representing you will knock on the delinquent patient's front door to ask for your fee.

Moreover, the out of town organization selected for you by the collector who is a member of the American Collectors Association will be bonded and is a member of its high standards of performance and ethics. Similarly, the collector in your community who was selected for membership in the association has also met the same high standards. Therefore your local collector, affiliated with the American Collectors Association, is equipped to give you superior service; and through him, you serve yourself and your colleagues by creating better patients for doctors everywhere.—*Chicago Medical Society Bulletin, May 20, 1950.*

AMERICAN COLLEGE OF ALLERGISTS ANNUAL MEETING

The American College of Allergists will hold its seventh annual meeting at the Edgewater Beach Hotel, Chicago, Illinois, February 12-13-14, 1950. This year these will be section meetings: Psychosomatic aspects of allergic diseases, under the leadership of Harold Abramson, M.D. of New York; on Pediatrics, under Bret Ratner, M.D. of New York; on Allergies of the Nose and Throat, under George Shambaugh, M.D. of Chicago; on Allergic Diseases of the Skin, under Rudolph Baer, M.D. of New York City; and the Allergic Aspects of Rheumatism and Arthritis, under George Rockwell, M.D. of Cincinnati, as well as a general session of the College when hay fever, asthma and the newer drugs will be discussed under the leadership of John Mitchell, M.D. of Columbus, Ohio, the President of the College.

This year the College is trying for the first time the experiment of offering its post collegiate instructional course on the three days just preceding its annual conclave. This course has been arranged with the thought in mind that 10% or more of all the patients in a physician's practice have an allergic component in their complaint. (The faculty consists of some 25 outstanding allergists.) The course is therefore an extremely practical one designed for any physician who wants to learn the basic principles of diagnosis and treatment of allergic individuals and techniques that are useful in the management of these patients. A fee of $35.00 will be charged for the three-day course lasting through February 9-10-11. For further information and registration write Fred Wittich, M.D., Secretary-Treasurer, American College of Allergists, La-Salle Medical Building, Minneapolis, Minnesota.

ORIGINAL ARTICLES



Acute Laryngo-Tracheo-Bronchitis and Its Management

Hans Von Leden, M.D., F.A.C.S.
Chicago

Since the control of diphtheria and the virtual extinction of diphtheritic laryngitis a disease commonly known as "croup" has assumed prime importance as the leading cause of obstruction of the respiratory passages. So it is not surprising that laryngologists, pediatricians, and general practitioners alike have taken an increasing interest in this entity, and that the recent literature abounds with references to acute laryngo-tracheo-bronchitis, to call it by its scientific name. It is not the purpose of this paper to review the pertinent literature or to enter into a debate on the nomenclature or etiology of this disase, but rather to present a practical outline of therapy which we have employed successfully and which can be followed without difficulty in any other hospital. For a detailed description of the disease and all controversial aspects the interested reader is referred to Neffson's[1] excellent book *Acute Laryngotracheobronchitis,* which was published within the past year.

As the name implies, laryngo-tracheo-bronchitis is an acute infection of the lower respiratory passages, extending from the larynx down into the smaller sub-divisions of the bronchial tree. It is endemic throughout the year, but may reach epidemic proportions in any locality during the winter months. Alert pediatricians and general practitioners with improved diagnostic facilities have demonstrated the high incidence of this disease. During the year 1949 seventy cases with this diagnosis were seen at St. Francis Hospital, Evanston, out of a total number of two thousand sixty admissions to the Pediatric

From the Departments of Otolaryngology, Stritch School of Medicine, Loyola University, and St. Francis Hospital, Evanston, Illinois.

Presented at the 110th Annual Meeting of the Illinois State Medical Society, Section on Eye, Ear, Nose and Throat, May 24, 1950, Springfield.

Department, which would indicate that one out of every twenty-nine children or more than three percent suffered from this condition. It shows a definite affinity for the male sex, boys representing eighty percent of our tracheotomized cases. Children between the ages of one and three years are commonly affected, although our patients ranged in age from a few months to fourteen years.

The pathologic picture is that of a descending inflammation of the mucous membranes lining the lower respiratory tract, followed by congestion, edema, and exudation of a thick tenacious secretion. Ulceration and crusting occur with superimposed infection in the more severe cases. If the respiratory obstruction is permitted to continue over a period of time, secondary vascular changes take place as the result of increased negative intrathoracic pressure. Galloway[2] stresses the importance of this vicious cycle by

TABLE 1

ACUTE LARYNGO — TRACHEO — BRONCHITIS
LOCAL SYMPTOMS:

Cold — ?
Croupy Cough
Stridor
Hoarseness
Retractions
Decrease in breath sounds

showing that the elevated negative pressure in the thoracic cavity causes further congestion and capillary damage; this in turn increases the edema and exudation, and eventually leads to atelectasis, emphysema, and severe pulmonary and cardiac embarrassment. A full appreciation of these abnormal pathologic changes is essential for the selection of those therapeutic measures, which lead to the full restoration of normal physiologic processes. These principles form the basis of our management and will be discussed in detail under this heading.

The symptomatology of acute laryngo-tracheo-bronchitis is so well known to this audience that no attempt will be made to discuss the individual signs or symptoms. Table 1 reviews the local symptoms in the order of their appearance. Table 2 indicates the general findings: anorexia, fever

TABLE 2

ACUTE LARYNGO — TRACHEO — BRONCHITIS
GENERAL SYMPTOMS:

Anorexia
Vomiting
Fever
Leucocytosis
Increased pulse and respiration
Toxic Symptoms
* * *
Circum-oral pallor, Cyanosis
Restlessness, Anxiety
Dehydration
Acidosis
Alkalosis
Exhaustion, Coma, Death

and toxemia of various degrees are usually present; as the illness increases in severity, the respiratory obstruction influences the general condition of the patient and other symptoms supervene, as outlined in this Table.

In the majority of cases a correct diagnosis of acute laryngo-tracheo-bronchitis can be made on the basis of the history and clinical findings alone. While the differential diagnosis includes all obstructions of the lower respiratory passages, there are only two other infectious diseases with similar findings: diphtheritic laryngitis and acute epiglottitis or supraglottic edema. If the history is very recent and the patient appears unusually toxic, an acute epiglottitis may be suspected. The diagnostic signs of this infection, due to Hemophilus influenzae B, are described on Table 3. The differentiation of early diphtheritic laryngitis presents a most difficult diagnostic problem; fortunately, this condition is now so rare as to be almost a curiosity. In any doubtful case it is always advisable to perform a diagnostic laryngoscopy. I fully agree with Neffson[1]

TABLE 3

SUPRA-GLOTTIC EDEMA
or
ACUTE EPIGLOTTITIS
DIAGNOSTIC FINDINGS:

Sore throat
Muffled voice
Toxemia — severe
Inspiratory Stridor
Expiratory "Rattle"
Sitting position
Appearance of Epiglottis

that "this procedure is absolutely harmless in skilled hands and can be performed in one or two minutes with a minimum of discomfort to the patient."

In any discussion of laryngo-tracheo-bronchitis it must be remembered that the prognosis depends largely on early recognition of the disease and timely hospitalization. The mortality has always been high; it varies anywhere from fifteen percent to one hundred percent depending on the diagnostic criteria and the management reported by different authors. Yet in the past two years my colleagues in the Department of Otolaryngology at St. Francis Hospital and I have had eleven consecutive cases of fulminating laryngo-tracheo-bronchitis requiring tracheotomy, with no deaths (Galloway 1, Leden 1, Soper 1, Von Leden 8). Galloway and his associates[3] have collected a similar series of fourteen consecutive cases in their private practice. These cases were favorable, because the patients were referred early by alert pediatricians and general practitioners, but I feel confident that similar results could be obtained anywhere by early hospitalization and treatment along basic physiologic principles.

It is the writer's opinion that all children with respiratory obstruction should be hospitalized immediately. An inflammatory swelling of the loose tissues in the subglottic area may cause asphyxia in a matter of hours. Last Christmas Eve I performed an emergency tracheotomy on a cyanotic two year old boy who had developed his first symptoms of respiratory involvement three hours previously. Less than a month ago I was called to the hospital to see another three year old youngster who had died of asphyxia on his way to the hospital. The total history of respiratory difficulties in this case extended over less than three hours, a poignant reminder that acute laryngo-tracheo-bronchitis requires immediate attention.

All treatment should be directed towards improving the failing respiration. In most cases this can be accomplished by medical means alone. *Rest* is invaluable to keep oxygen requirements at a minimum and to conserve strength. Small doses of diluted whisky by mouth or barbiturates by rectum may be used to allay anxiety. Strong *sedation* is contraindicated, since restlessness is an important sign of increasing obstruction. Opiates lower the struggle for air and prevent the expectoration of accumulated secretion by inhibiting the cough reflex. Atropine increases the stickiness of the exudate and must not be used. *Fluids* should be given orally or parenterally in sufficient amounts to relieve dehydration and to liquefy secretions. *Oxygen*, administered through a nasal catheter or through a nebulizer, supplies this essential element and relieves the distressing symptoms of anoxia. *Antibiotics* in the form of penicillin, streptomycin or aureomycin should be prescribed early in large doses for their long-range effect. It must be emphasized that they are of no value in relieving acute respiratory distress.

This process is aided most by an effective system of humidification. A relative humidity of 90% at room temperatures of 68-70°F. is ideal: it reduces loss of body fluids, liquefies tracheo-bronchial secretions and soothes the inflamed mucous membrane. The cool air assists in the reduction of the high fever, thus lowering the metabolic rate and the oxygen requirements of the patient. In contra-distinction, the ordinary croup kettle or other forms of steam production heat the surrounding air and thereby often actually decrease the relative humidity of the room. Unfortunately the cost of commercial units for the production of heatless humidity has been prohibitive and, as a result, few hospitals have purchased such equipment. Thanks largely to the cooperation of our active and far-seeing Pediatric Department and of Mr. Leo Lynk, our resourceful engineer, we have solved this problem by the perfection of an automatic heatless humidity unit at a material cost of about $125.00.

In this unit, compressed air is passed through a system of strainers and filters to a pressure regulator, which reduces the pressure to forty pounds per square inch. The air is then forced over two siphons mounted in a constant level water tank, and a fine spray is produced. The consistency of this spray can be varied by adjusting the spray nozzles. The entire apparatus is turned off and on by a magnetic valve, which is controlled by an automatic humidistat or hand control, as desired. The room temperature is regulated by an ordinary radiator with thermostatic control.

All children admitted to St. Francis Hospital with the diagnosis of acute laryngo-tracheo-bron-

chitis are immediately taken to this high-humidity room, and the good results have surpassed our expectations. Several patients with this disease who would have required surgical intervention in our old overheated steam room were treated expectantly and recovered promptly. The length of hospitalization for many others has been decreased considerably. Any hospital should be in a position to duplicate this apparatus and give its patients the benefit of these good results.

If medical treatment fails or is inadequate to relieve the existing obstruction, prompt surgical intervention is indicated. Mechanical relief can be obtained by bronchoscopy and aspiration, tracheotomy, or intubation. Bronchoscopic aspiration and inspection is a useful preliminary to tracheotomy, although it is by no means necessary for the performance of this operation. In an acute emergency the Mosher Life Saver may provide temporary relief preliminary to a tracheotomy. The relative values of intubation and tracheotomy have been the object of much argument and debate. It is the opinion of the writer that tracheotomy is the treatment of choice. After intubation an expert must be on hand at all times to reinsert a coughed-out tube; this is obviously not feasible in most hospitals. Table 4 shows the reasons for performing a timely tracheotomy. Immediate restoration of the airway and of normal intrathoracic pressure, and prevention of sudden asphyxia and gradual exhaustion are the main objectives. Additional advantages are automatic provisions for setting the larynx at rest, for easy access to the trachea and bronchi during the aspiration of crusts and bronchial secretions and for irrigating the smaller subdivisions of the bronchial tree. Normal food intake is also encouraged by the relief of the obstruction.

TABLE 4

ADVANTAGES OF TRACHEOTOMY IN ACUTE LARYNGO — TRACHEO — BRONCHITIS

1. Restoration of airway
2. Prevention of exhaustion
3. Prevention of sudden asphyxia
4. Restoration of normal intra-thoracic pressure
5. Facilities for aspiration
6. Facilities for irrigation
7. Complete rest of larynx
8. Provision for normal food intake

TABLE 5

ACUTE LARYNGO — TRACHEO — BRONCHITIS
INDICATIONS FOR TRACHEOTOMY

I. Severe obstruction:
   1. Change in stridor
   2. Restlessness
   3. Deep retractions
   4. Pallor — Cyanosis
   5. Anxiety
   6. Absent breath sounds

II. Exhaustion:
   1. Listlessness
   2. High fever
   3. Rapid, shallow breathing
   4. Weak, fast pulse

III. Prolonged obstruction.

The socalled disadvantages of a tracheotomy are readily refuted: Drying of tracheo-bronchial secretions can be avoided in a high-humidity room or by the use of an Albers[4] nebulizer. A conspicuous scar is easily repaired by plastic surgery. Surgical shock is a small factor compared to the overwhelming relief experienced by the patient. Restless and struggling children usually become quiet and cooperative as soon as the trachea is incised and the respiratory obstruction is bypassed; restful sleep often intervenes while the patient is still on the operating table. Tracheal granulations and strictures can generally be avoided by the removal of an elliptical segment of the anterior tracheal wall. This procedure prevents buckling and narrowing of the trachea and inflammatory granulations at the cut edges of the split cartilaginous rings, as demonstrated by Waldapfel[5]. In eight years of laryngological work at large private and charity institutions the writer has never seen a case of fatal pneumothorax or fatal mediastinal emphysema following a correct tracheotomy. This observation has been confirmed by Figi[6], Galloway[3], and Leden[7] on the basis of their experiences in several hundred cases.

The writer's indications for tracheotomy in acute laryngo-tracheo-bronchitis are presented on Table 5. Among the danger signs of severe obstruction I should like to stress particularly restlessness and anxiety. This combination is an indication of extreme obstruction which must be

relieved instantly. Signs of exhaustion call for the same prompt treatment. Prolonged obstruction, though only moderately severe, may lead to serious and irreversible changes in the respiratory and cardiovascular systems, as described in detail above; these should be prevented by a timely tracheotomy. One cannot expect good results with a tracheotomy after obstruction or cardiac exhaustion have passed beyond the stage of possible recovery. Two factors have been the chief contributors to the poor results with tracheotomy reported by some authors: a delay in surgical intervention until the patient is in extremis, and inadequate post-operative care.

No attempt will be made to discuss the care of a tracheotomized child in front of this select audience, all of whom have had ample experience with such cases. Close attention to all the details of the postoperative care is just as important as the surgical procedure. It has been the experience of the writer that one cannot tell a nurse too often to keep a faithful watch over her charge. In my opinion, our own good results are largely due to the constant supervision of the postoperative treatment by the nursing staff in our Pediatric Department. Postural drainage, frequent aspirations and irrigation of the trachea and bronchi require constant attendance and meticulous care. In severe cases of bronchial inflammation the inhalation of penicillin and streptomycin through a nebulizer by aerosolization may be of distinct advantage after tracheotomy, in addition to the medical supportive treatment outlined above.

Decannulation can usually be accomplished between the fourth and eighth postoperative days, unless the patient has developed a severe secondary infection of the bronchioles or an associated pneumonia. However, the incidence of these complications is low, if a tracheotomy is performed in time and if the patient is kept in a high-humidity room after the surgery. After decannulation and subsistence of all symptoms it is advisable to transfer the patient to another room for a period of twenty-four hours for adaptation to normal humidity and temperature before dismissal from the hospital.

CONCLUSION

Results obtained in the treatment of acute laryngo-tracheo-bronchitis depend directly on a thorough understanding of the underlying physiologic and pathologic processes and application of these principles to the management. Early recognition and hospitalization, good medical supportive care, including the use of a heatless humidity unit, and prompt tracheotomy when surgical intervention is indicated, lead to a better prognosis and decrease the mortality for this disease. Eleven consecutive cases of acute fulminating laryngo-tracheo-bronchitis treated by tracheotomy without a mortality, prove the value of this management.

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Radioiodine (I^{131}) in the Diagnosis and Treatment of Diseases of the Thyroid

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Radioactive iodine has been the most important tool responsible for the recent advances made in our understanding of normal and abnormal thyroid function. It was first made available in 1934 by Fermi[1] and first used in man in 1938 by Hertz, Roberts and Evans[2] and Hamilton[3]. Of the several isotopes of iodine known, I^{131} prepared in the atomic pile from tellurium is used almost exclusively. This isotope has a half-life of eight days and disintegrates to xenon emitting a beta particle and two gamma rays[4]. This emission of radiation is detected by Geiger counters or sensitive photographic film permitting measurement of quantities too small to be found by other means. In the usual tracer studies 0.008 micrograms of I^{131} or less are given[5]. This quantity, the atoms of which are disintegrating at the rate of 3.7×10^7 times a second, is called a millicurie and is the unit in terms of which most isotope dosages are expressed.

The state of thyroid activity has been shown to influence the accumulation of iodine within the gland[6]. This fact is not only important in the diagnosis of thyroid disease but also offers a new avenue of approach to the clinical study of normal and disordered thyroid function. It is basically different from other available tests of thyroid activity such as the basal metabolic rate, blood cholesterol, and plasma protein bound iodine determinations. As the result of extensive investigation it appears that at least two distinct factors are responsible for the appearance of radioiodine in the thyroid gland. The first has been called the "iodide trap" and represents the ability of the thyroid epithelial cells to remove inorganic iodine from the blood and concentrate it in their cytoplasm[7, 8]. The second factor is the ability of these cells to bind the inorganic iodine to tyrosine to form diiodotyrosine and then thyroxin, the latter, in association with serum globulins[9], probably being the form of the circulating thyroid hormone[10]. The thyroid also stores hormonal iodine in the colloid in association with protein[11]. These two factors may be dissociated by various drugs. Administered radioiodine accumulates in the thyroid gland in an exponential fashion, reaches a peak between 24 and 48 hours and then slowly declines. During thiouracil therapy, however, the iodine accumulates rapidly but reaches a peak within one to three hours and disappears in twenty-four hours[10]. (The same is true during treatment with sulfonamides[12]). The iodine has been shown to remain in the inorganic form, the binding with tyrosine having been blocked by the drug[13, 14]. On the other hand, thiocyanates act as a specific poison for the iodide trap and prevents accumulation of inorganic iodine in the thyroid gland[7, 10]. Thiouracils thus prevent the storage of organically bound iodine and thus the formation ultimately of the thyroid hormone.

The radioiodine concentration in the human thyroid gland can be measured in several ways. Information gained by such studies are of value not only in the diagnosis of thyroid disease but also of importance in the determination of dosages of radioiodine to be used therapeutically. This report presents a method of estimation of thyroid activity in vivo and the application of this method in the treatment of diseases of the thyroid gland.

Material and Methods: Tracer doses of I^{131} ranging from 0.1 to 1.0 millicuries were given to 58 patients with and without diseases of the thyroid gland. This amount was placed in 30 to 60 ml. of water and taken orally by the pa-

From the Hektoen Institute for Medical Research of the Cook County Hospital and the Isotope Laboratory, Mercy Hospital, Chicago.

The radioiodine was supplied and obtained on allocation from the Atomic Energy Commission, Oak Ridge, Tenn.



Figure 1. Geiger counter and scaling unit mounted on x-ray tube stand shown in use. The Geiger tube is in the lead cylinder above the patient's thyroid gland.

tient. An equal amount of radioiodine to be used as a standard was placed in a two ounce glass bottle almost full of water and tightly stoppered. The number of counts over the thyroid area was determined 24 hours after the tracer dose was given by placing the Geiger tube enclosed in a cylindrical lead shield 25 cm. distant from this point (*Figure 1*). This was then compared with a number of counts obtained from the standard at the same distance. The normal background for this Geiger counter is 35 counts per minute The percentage uptake by the thyroid gland was calculated as follows:

$$\frac{\text{Counts per minute over thyroid} - \text{background}}{\text{Counts per minute over standard} - \text{background}} \times 100 = \text{Percentage uptake}$$

At the distances and geometry employed, a one millicurie standard resulted in approximately 4000 counts per minute. Smaller amounts gave proportionally fewer counts. Various areas of the body other than the thyroid generally showed less than 10 percent of the amount concentrated in the gland. Since this is near the limit of accuracy of this method it was disregarded.

In 24 patients, the urinary excretion of administered radioiodine was determined. This was done by comparing the counts per minute in an aliquot of a 24 hour urine sample obtained after the tracer dose was given with the counts per minute obtained from a standard prepared to contain 0.0001 millicurie per ml.

In those cases selected for treatment with the exception of the carcinomas, an attempt was made to give that amount which would deposit 0.10 millicurie I^{131} per estimated gram of thyroid tissue. This amount would approximate 5000 roentgen-equivalents to the entire gland[15]. Each gland was classified according to size as one to four or more times normal (30-120 plus grams). The percentage uptake obtained from tracer studies was used to determine this dose as follows:

$$\text{Millicuries } I^{131} = \frac{0.10 \text{ (estimated weight of gland)}}{\text{(percentage uptake of gland)}} \times 100$$

In the few cases of carcinoma of the thyroid which were treated, an attempt was made to destroy the normal thyroid tissue first with 25-50 millicuries of I^{131} so that whatever radioiodine was subsequently administered would be concentrated by the carcinoma.

Counts were obtained over the thyroid at weekly intervals after administration of the

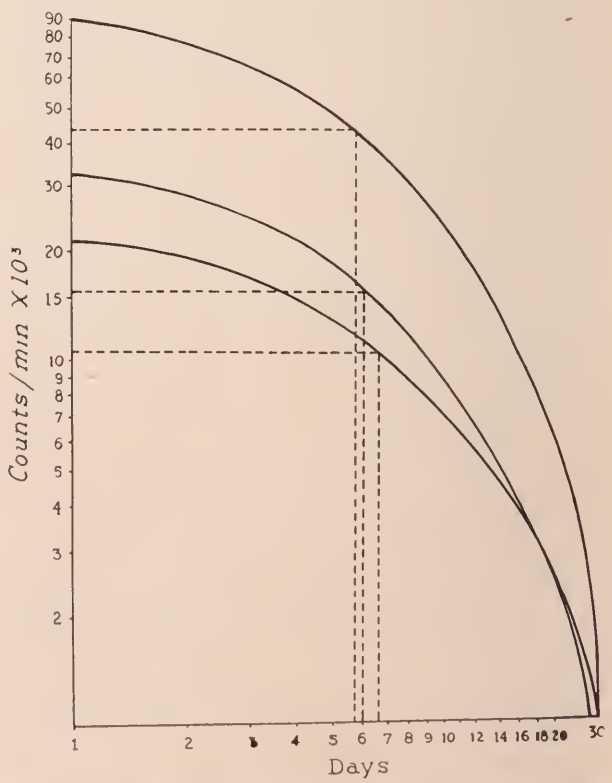


Figure 2. Biologic radioactive decay curves in three patients. The half-lives in these cases are 5.7 days, 6.0 days, and 6.7 days.

TABLE 1

Results of tracer studies of thyroid function with I^{131} in normal individuals and in patients with various disorders of the thyroid gland.

Diagnosis	Number of cases	Average percentage uptake by thyroid	Range of values
Toxic goiters	29	51.8	29.0-95.0
Euthyroid state	7	22.6	14.3-27.0
Myxedema	4	9.8	3.6-15.0
Non-toxic goiter	5	27.0	12.0-40.0
Carcinoma of the thyroid	9	25.8	13.0-32.0
Miscellaneous			
Chronic Nephritis	1	39.2	
Sulfonamide block	1	3.0	
Post-thyroiditis	1	15.0	
Post-total thyroidectomy	1	0.0	

radioiodine therapeutically. These counts were plotted logarithmically against the logarithm of the time in days. From this it was possible to calculate the biological half-life of the radioiodine. In three cases this was found to average six days in contrast to the physical half-life of eight days (*Figure 2*).

Results: A. Diagnostic. The uptake of radioiodine was found to range from 15 to 30 percent of the tracer dose with a mean of 22.6 in individuals with normal thyroid function; from 30 to 95 percent with a mean of 51.8 in the hyperthyroid state; and less than 15 percent in hypothyroidism (*Table 1*). The uptake in two of the five non-toxic goiters examined was over 30 percent. All of the nine cases of carcinoma of the thyroid examined showed normal or less than normal uptake and in two cases known metastases could not be demonstrated. In one case of chronic glomerulonephritis a considerable amount of radioiodine was found in the urinary protein. The uptake by the thyroid in this instance was 39.2 percent. One patient who had been taking sulfonamides showed only 3.0 percent uptake.

The urinary excretion of radioiodine in the first 24 hours after administration of tracer doses was less than 25 percent of the amount given in all cases of hyperthyroidism (*Table 2*). In persons with normal or low thyroid function the excretion was above 25 percent in all instances. When the urinary excretion was plotted against the uptake it was apparent that the values did not show a straight line relationship to one another (*Figure 3*). The reason for this was not apparent. Because of the marked variations in results the urinary excretion studies were discontinued.

TABLE 2

Urinary excretion of I^{131} in the first 24 hours after administration of tracer doses in various thyroid states.

Thyroid state	Average Percentage urinary excretion	Range of values
Euthyroid	37.1	27.0-53.2
Hyperthyroid	14.4	2.3-29.0
Hypothyroid	36.6	31.2-42.0

The following two case reports illustrate the value of radioiodine in the diagnostic study of thyroid function:

Case 1. M.S., a 63 year old Negress entered the hospital complaining of shortness of breath, weakness and swelling of the ankles for the past six months. She was found to have generalized enlargement of the heart, auricular fibrillation with a rapid rate, rales in both lung bases, ankle edema, and a smooth symmetrical enlargement of the thyroid gland. BMR's were plus 50%, plus 35% and plus 48%. The question arose as to whether the elevation of the BMR was due to hyperthyroidism or to cardiac failure. She was given a tracer dose of 0.10 millicurie I^{131}. The uptake by the thyroid gland was found to be 66 percent of this amount while the urinary excretion in the first 24 hours was 13.8 percent. She was subsequently given a therapeutic dose of radioiodine and after 12 weeks there had been a 19 pound weight gain, disappearance of

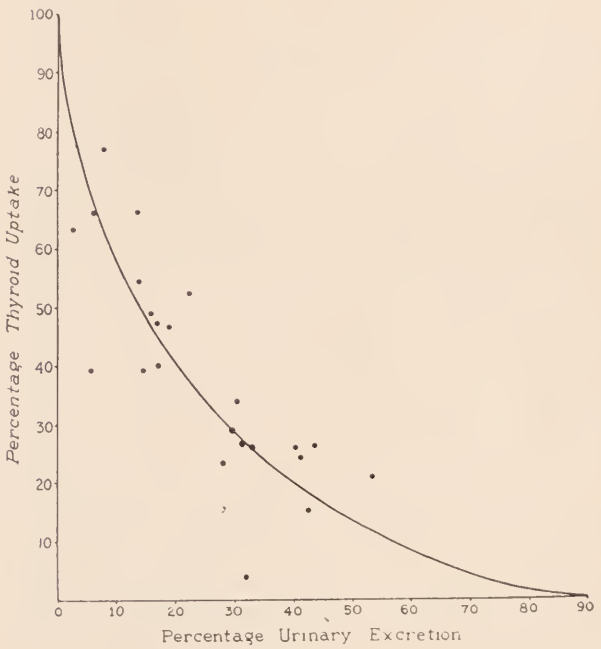


Figure 3. Relation between percentage urinary excretion of radioiodine and percentage thyroid uptake. The lack of linear correlation is apparent.

TABLE 3

Results of treatment of various diseases of the thyroid gland with radioiodine.

Diseases	Number of cases	Number of cases with recurrent goiters	Average percentage uptake I^{131}	Average therapeutic dose in mc.	Results
Diffuse toxic goiter	10	2	49.0	9.7	6 excellent 1 hypothyroid 3 repeated-good results
Nodular toxic goiter	11	7	48.1	9.1	8 excellent 2 died-other causes 1 repeated-good result
Diffuse non-toxic goiter	1	1	40.0	20.0	excellent
Carcinoma of the thyroid	3	3	27.1	113.0	uniformly poor

dyspnea, edema, and nervousness. The fibrillation persisted but the pulse rate was 72.

Case 2. S.F., a 54 year old white female entered the hospital complaining of dyspnea and nervousness of several years duration. She had a thyroidectomy eight years previously with only temporary amelioration of these symptoms. She was found to have tacchycardia, rales in both lung bases, and ankle edema. The thyroid gland was not palpable. Several BMR's were in the vicinity of plus 35%, while the blood cholesterol was 316 mg. per 100 ml. She was given 1.0 millicurie I^{131}. The uptake by the thyroid gland was found to be 17.7 percent, in the lower level of the normal range. The signs and symptoms were relieved by control of the cardiac failure.

These two cases presented very similar findings yet in the first the cardiac failure was due to hyperthyroidism and disappeared after adequate therapy. In the second case the cardiac failure was due to a primary disease of the heart and the elevation of the BMR was due to cardiac failure.

B. Therapeutic. Ten patients with diffuse toxic goiters were treated with radioiodine (*Table 3*). The results were excellent in six with disappearance of symptoms and marked shrinkage of the goiter. In three other patients a second dose of radioiodine had to be given to achieve the same results. In one case a mild hypothyroidism resulted. Eleven patients with nodular toxic goiters were treated. Seven of these were recurrent one or more times after surgery. Excellent results were obtained in eight with almost complete disappearance of the nodular gland in almost all instances. One patient had to be retreated. Two patients in this group expired, one after three weeks because of myocardial failure and one after eight weeks because of chronic pulmonary disease. In the second case, necropsy revealed only a firm bit of fibrous tissue with a few colloid-poor acini where a palpable nodular gland had been (*Figure 4*).

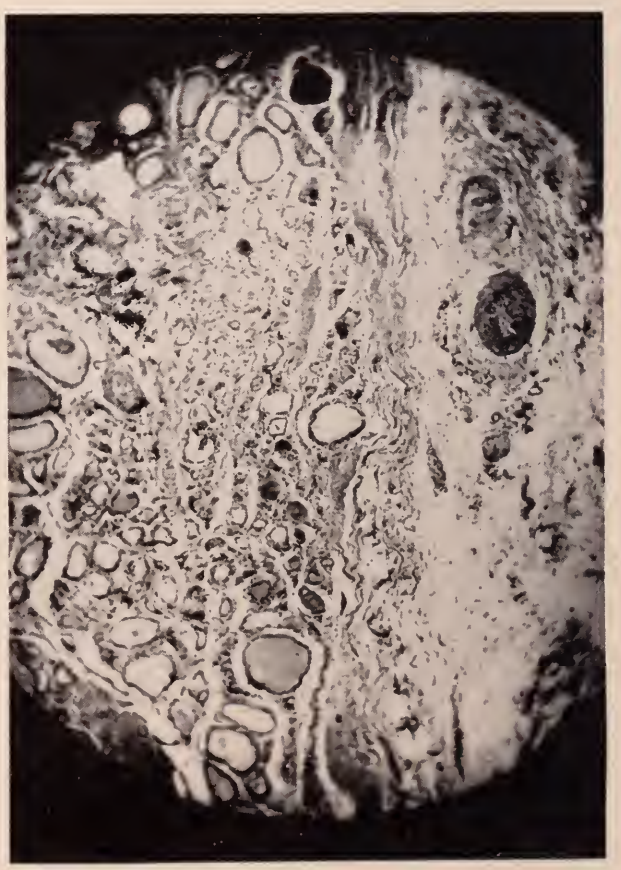


Figure 4. Section of thyroid obtained at necropsy eight weeks after radioiodine therapy. Note the fibrosis, the small amount of colloid, the absence of lymphoid elements, and the marked thickening of the arterial wall.

A typical example of this group is as follows:

Case 3. M.P., a 27 year old white female entered the hospital complaining of palipitation, nervousness, weight loss, and pain in the chest. She had a partial thyroidectomy one year previously with relief of these symptoms for two months. Since then she noted progressive enlargement of the thyroid, increasing exophthalmos, tremor and palpitation. She was found to be extremely tense and irritable with a fine tremor, marked exophthalmos, a pulse rate of 120 per minute and with a thyroid enlarged to twice normal size. BMR's had been over 100% at times. The blood cholesterol was 135 mg. per 100 ml. She was given 1.0 millicurie I^{131} and the uptake by the thyroid gland was 91.1 percent. She was given an additional 7.0 millicuries of I^{131}. Within two weeks she had gained six pounds and the taachycardia had dissappeared. After six weeks the gland was barely palpable and the patient had no symptoms referable to the hyperthyroidism. There was no change in the exophthalmos at first but gradually it began to regress. It had not yet completely disappeared when the patient was last seen one year after treatment.

One patient with a recurrent non-toxic goiter was also treated because of the relatively high uptake of radioiodine. A report of this case follows:

Case 4. D.T., a 28 year old female was first seen complaining of a mass in the neck which had been present since birth. One year prior to this examination the mass was excised and found to be a hyperplastic thyroid gland with no evidence of malignancy. On examination a diffusely enlarged thyroid gland four times normal size was found. There were no signs of toxicity and the BMR's were between plus and minus 5%. She was given 1.0 millicurie I^{131} and the uptake by the thyroid was found to be 40.0 percent. Because the patient wished to achieve cosmetic improvement without further surgery, it was decided to give her 20 millicuries of I^{131}. Within six weeks the gland had almost entirely disappeared. Three months after the therapeutic dose, there were only firm almond-sized lateral lobes palpable although the patient had no signs or symptoms of hypothyroidism.

Three cases of carcinoma of the thyroid were treated with uniformly poor results. The chief difficulty was that the tumor tissue in these patients was unable to concentrate and retain the radioiodine.

Discussion: Many methods have been devised for evaluating thyroid function. The most widely used, the basal metabolic rate, is an indirect measure of this at best and is fraught with many sources of error, in spite of its simplicity. Studies of iodine levels in blood are too complex for routine clinical use and other blood chemical findings such as the cholesterol level are not well enough correlated to be of great value. Radioiodine, by virtue of its unstable nature, and because it is concentrated and handled by the thyroid gland in the same fashion as the naturally occurring form of the element is ideal for the study of normal and disordered thyroid function. Several approaches to the problem are available. These consist of various studies of the concentrating ability for iodine of the thyroid gland as measured by external survey [16, 17], that rate at which iodine appears in the blood stream organically bound [18, 19], and the amount of iodine excreted in the urine[20, 21, 22]. Each method has its particular merits and disadvantages. However, the simplest by far and the one which will lend itself best to routine clinical use as an ambulatory procedure is the determination of the percentage uptake by external survey. The usefulness of the method is further shown by the ease with which therapeutic doses may be estimated.

With this simplified diagnostic tool, a similarly simplified therapeutic procedure has become available for use in clinical medicine. Early in the use of radioiodine for the treatment of hyperthyroidism it was advised that the material be given only to those over the age of 50, and preferably to those in whom at least a biopsy of the goiter had been obtained. These precautions are now felt to be largely unnecessary[23]. The amount of irradiation the gonads receive during the course of radioiodine treatment of hyperthyroidism is quite small[24] because of the distance of the chief source, the thyroid, and the short time the iodine remains in the urinary tract or gastrointestinal tract, the only other sites of appreciable concentration[25]. Also treatment of diffuse or nodular toxic goiters now seems logical and practical without biopsies. Solitary toxic adenomas can be treated and apparently destroyed. Solitary non-toxic adenomas are not suitable for treatment. The danger of malignancy renders surgery imperative in these instances[26]. Apparently there are very few carcinomas which have an uptake of radioiodine in the range of the toxic goiters. This especially true when this number is compared to the number of non-malignant toxic goiters that are seen[27].

The treatment of hyperthyroidism with radioiodine is ideal from the point of view of the patient. No lengthy preparatory period is

necessary, no surgery is involved, no prolonged hospital stay is necessary, and in milder cases, the patient is ambulatory[28]. Results become apparent after two weeks and the final result can be seen in six weeks to three months. Side reactions are negligible even in those patients very sensitive to iodine. No changes in the blood counts were noted. Transient swelling and tenderness of the thyroid are said to occur after the first week [29] and this was seen occasionally in this series. At this time there may be some increase in the symptoms of the thyrotoxicosis and therefore in severe cases Lugol's solution is administered for one week beginning on the third day post-therapy[30]. This is also advisable especially in the severe cases to obtain symptomatic relief more quickly. The incidence of hypothyroidism was less than ten percent in 347 cases reviewed[31]. In the present series it was seen only once (4%). Although several patients had to be retreated once, none needed a third dose and all the patients were considerably improved after the first treatment.

The results of this method of therapy are most striking in patients with thyrotoxic heart disease. It is extremely gratifying and dramatic to see a patient in cardiac failure with auricular fibrillation within six weeks after treatment up and about with perfect ease with a normal sinus rhythm. This enthusiasm has been dampened only by the pessimistic outlook that is present in the treatment of thyroid carcinoma. Few of the carcinoma cells have an affinity for radioiodine and even this may be present for a while only and then those functioning cells may lose their ability to concentrate the material[32]. The use of tracer studies continues in the search for those cases that may have sufficient concentrating ability in the tumor to make therapeutic attempts worthwhile[25]. It appears that whereas radioiodine will replace surgery as the method of choice for the treatment of hyperthyroidism, radical surgery and conventional irradiation remain the treatment for carcinoma of the thyroid.

SUMMARY

Tracer studies of thyroid function using radioiodine were obtained in 58 patients using a simplified method of external survey. The average percentage uptake was 9.8 in patients with hypothyroidism, 22.6 in those with normal thyroid function, and 51.8 in those with hyperthyroidism. In general and uptake of greater than 30 percent indicated hyperthyroidism.

Radioiodine was given to 25 patients for the treatment of various diseases of the thyroid gland. Excellent results were obtained in the treatment of 18 out of 21 cases of toxic goiters. One case of hypothyroidism developed in this series. One case of non-toxic goiter responded well to treatment. None of the three cases of carcinoma of the thyroid treated showed any improvement.

The use of radioiodine for diagnosis of the status of thyroid function is a simple procedure easily adapted for routine clinical use. The use of radioiodine may well become the treatment of choice for hyperthyroidism.

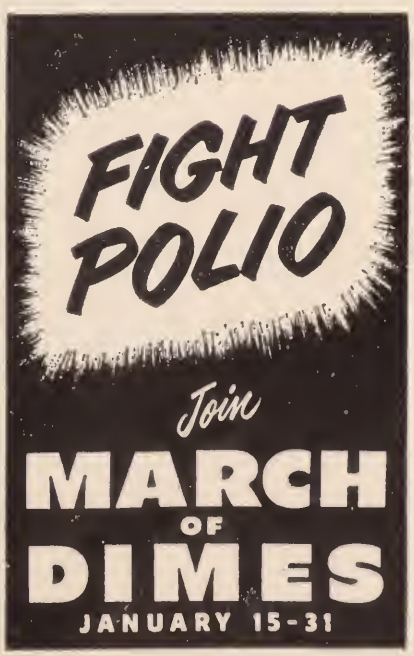
ADDENDUM

Since the writing of this paper we have been using a new bismuth-plated cathode Geiger tube made by Radiation Counter Laboratories, Chicago. The bismuth makes the tube about five times as sensitive to the iodine gamma radiation and by using it as we had the older tube, we have increased counting rates over twelve times. Now we obtain 50,000 counts per millicurie. This has enabled us to cut the size of the tracer dose to between 0.05 and 0.10 millicuries.

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The Function of the Radiologist

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The practice of roentgenology, one of the youngest branches in the field of modern medical specialization, is quite different in many of its aspects from other recognized specialties. It was conceived with the invention of the x-ray machine. At first the use of the machine was limited to the study of simple anatomical aberrations. Only a fundamental knowledge of anatomy and pathology was essential. In the course of time the machine was relegated to a less important role, since the application of medical knowledge developed standards of criteria for more accurate diagnosis. In summary, the roentgenologist by virtue of his training minimizes the importance of the machinery and emphasizes the coordination of anatomy, pathology, and clinical history in interpreting the film.

The Status of the Radiologist.—The training of the specialist in medicine generally includes the study of x-ray in the chosen field. For example, the urologist claims he can interpret as ably as the radiologist intravenous and retrograde pyelography films; the gastroenterologist, gastrointestinal films; the oto-laryngologist, sinus films; the specialist in tuberculosis, chest films; and the orthopedist, bone films. Assuming all this were true, what is there left for the roentgenologist?

By far the greater satisfaction comes in correlating the films in a particular series. A knowledge of x-ray interpretation limited to only one field or phase of x-ray is dangerous by its implication of exclusiveness. Disease does not follow our man-made arbitrary divisions. If the specialist would go farther afield in his knowledge of x-ray, then he is just beginning to enter the vast panorama of varied radiological findings. Consider this case as a point of illustration: an elderly man, complaining of loss of weight, constant irritable cough, occasional episodes of dyspnoea, poor appetite and anemia, reports to the local cancer clinic for localization of the tumor. A chest film is taken. A sharply defined convex tumor mass is found in the right cardiophrenic angle. It does not pulsate on fluoroscopy. The leaf of the right diaphragm shows a poor excursion. Would our chest men dare to commit themselves to a presumptive diagnosis? Who is to undertake the responsibility of "choosing" the diagnosis? This is the routine case for the roentgenologist. Further fluoroscopy of an adjacent system is indicated: i.e., gastrointestinal series. The esophagus then shows a large portion of the cardiac end of the stomach herniated through the esophageal hiatus. The correlation of systems, the ability to interpret x-ray films beyond the specific limitation of one field measures the true value of the roentgenologist's worth. A little learning is a dangerous thing.

Other illustrations easily come to mind. A urologist studying a pyelographic film overlooked an osteoblastic metastasis in the lumbar spine; an obstetrician looking at a routine scout film of the abdomen missed a large cystic area in the pubic bone; a chest man failed to observe an irregular shadow in the gas bubble of the stomach which proved susequently to be an early carcinoma of the cardiac end of the stomach. Any radiologist can parallel these illustrations culled from his own experiences with other competent specialists.

When a radiologist is employed in the smaller hospital, which is located in small or medium-size town, there frequently may be no recognized specialist in specific fields, no orthopedist, or cardiologist, or urologist, or gastroenterologist. Here the radiologist has the full responsibility for diagnosing the disease processes of these respective fields. Wherever a specific specialist is absent, the contribution of the radiologist is proportionately increased. For here he dons the cloak of the missing specialist. This situation is commonplace throughout the states, with the exception of the large medical centers and in the big cities.

In addition, instances come to mind where specialists consult the radiologist for solution to specific problems. Thus the pediatrician relies upon the radiologist's diagnosis of a child's chest

condition, such as in atelectasis, rather than calling upon a chest specialist; the surgeon, suspecting bowel obstruction, utilizes the skill of the radiologist to develop the diagnosis. The radiological diagnosis of acute abdomen is being fully studied and utilized by radiologists as a group.

It is not known generally that the radiologist's responsibility goes beyond the mere diagnosis of cases. The referring physician often asks for an evaluation of the findings. What is the significance of a negative gall bladder in the presence of positive clinical findings? Consider the significance of negative findings in a case of sacroiliac or sciatic pain. That is a chapter in itself. What is the significance of negative x-ray findings in a gastro-intestinal series with a history of hematemesis? How long does it take a fractured skull to heal? Does fluoroscopy demonstrate callous formation? Does virus pneumonia give a characteristic x-ray sign? Can a slipped intervertebral disc be recognized on a flat film of the spine?

Professional Relationships.—The relationship of the radiologist to the patient is completely different from the relationship of other physicians, including both specialists and general practitioners, to that same patient. The ideal, historical exemplary attitude of trust and confidence by the patient in his physician is by no means deprecated, even in this age of highly organized laboratory procedures and mechanistic approach. This reciprocal personal understanding exists, to a greater degree between the patient and his family doctor; and to a lesser extent with specialists whom the patient sees rarely or only upon consultation. With the diagnostic roentgenologist it occurs rarely. Those interested in the immediate psychological contact with the patient may find this depressing. For the radiologist, however, this phase of medicine is not considered significant. The patient is sent to the radiologist for the elicitation of certain objective findings. He finds subtle and ample satisfaction in accomplishing the specific task with which he is charged. The more definitive the diagnosis, the more deductive the processes by which the diagnosis is made, the greater the reward. The satisfaction for the radiologist in doing the job well is based on imparting valuable information to the referring physician which ultimately benefits the patient. In the field of radiology the accent is not on the direct personal relationship, but on the discovery and evaluation of objective findings, as accurately as possible.

This impersonal status permits the radiologist to enjoy an enviable lack of bias, and oddly enough, is of benefit to the referring physician and of value to the patient. Who but the radiologist can impart a diagnosis with such complete impartiality? What fearful and disruptive consequences many diagnoses bring: metastatic carcinoma of the spine, or pelvis, carcinoma of the lung, carcinoma of the stomach, depressed comminuted fracture of the skull, congenital anomalies in infants, tuberculosis with cavitations. The determination of these catastrophis illnesses so terrify the referring physician that he frequently is unable to impart the information to the patient, and hides behind a veil of euphemisms.

The value of confirmation is another facet of the radiologist's contribution. The physician has made a clinical diagnosis of a condition; the radiologist impartially and independently arrives at the same diagnosis, thus reinforcing the doctor's diagnosis. The specialist, in reviewing x-ray films in his own field, brings to his search for a diagnosis a preconceived opinion based on his previous examination of the patient. Unlike the radiologist's impartiality, he tends to use the x-ray to confirm the clinical diagnosis.

In the application of radiation to disease processes, the role of the radiologist in this field is so pre-eminent as scarcely to merit discussion, with the exception of the dermatologist employing superficial therapy.

Educational Contribution.—The student receives only a fleeting impression of the significance of x-ray work in its application to the general practice of medicine. In his interneship his acquaintanceship is somewhat expanded, for he has a greater responsibility in following the cases through from hospital admission to the discharge of the patient. The radiologist in the hospital is in a position to present to the interne by informal discussions a series of similar cases, to show all the variations in the disease processes, as in different types of filling defects in the gastro-intestinal tract, the manifold variations of pneumonic lesions in the chest, the different types of tuberculous infiltrates, etc. By these means the interne obtains an increasing awareness of

just what function the x-ray plays in the diagnosis of the disease. He learns its limitations and its potentialities.

The resident has greater opportunity to increase this area of knowledge by his longer stay in the institution, for residents in every specialty must learn much of x-ray, to guide them properly in their chosen fields. Whose responsibility is it to teach these men the x-ray application, if not the radiologist's. Here the radiologist serves an essential function.

Hospital Management.—A very obvious aspect of the radiologist's responsibility is the sheer physical feat of managing the hospital x-ray department. This is taken so for granted, and rightly so, that it is never mentioned in any scientific discussion. Consider the x-ray department: thousands of people enter it annually for various examinations. In pursuance of these examinations, x-rays are taken, for which technicians must be trained, supervised and directed, and standards maintained; films must be ordered, reports on each examination must be studied, reviewed, dictated, signed, and submitted to the referring physician promptly. Duplicate records must enter the hospital files. In many instances a more immediate follow-up by telephone communication must be made to the doctor. Requests from attending staff for a file of cases on a specific subject must be gathered. This daily routine must be handled so effortlessly that neither patients nor consulting doctors are unduly aware of the mechanics involved. Each radiologist works out a routine of scheduling cases according to the abilities of his technicians and the type of machines at his disposal.

In the purchase of new x-ray machines and equipment, which usually involves vast sums of money, the opinion of the radiologist is paramount, for he is the one man in the medical field, best equipped by training and knowledge, to determine the type of machine needed for the demands of the hospital. Likewise, in new or remodelling hospital construction, who else is similarly qualified to determine the best functional lay-out for an efficient x-ray department? Granted that the x-ray companies are eager to suggest designs and to sell machines, it is the duty of the radiologist to decide which features should be added, omitted or modified to conform to the demands and needs of his community.

This article touches upon only the more obvious aspects of this topic; additional features will readily come to the minds of interested readers. An excellent analysis of the radiologist's function has been made by Vice-Admiral Ross T. McIntyre, formerly Surgeon General, U. S. Navy. It is a pleasure to quote these words by a non-radiologist, certainly an impartial observer:

"Radiology is, of all the specialties, the one perhaps most nearly related to every other field of medicine. It is often the magic key in diagnosis. It is essential to the internist and the surgeon, the ophthalmologist, the obstetrician, and the general practitioner. All are dependent upon the accurate interpretation of the x-ray films, and no other specialty is so necessary in all branches of medical practice. There is perhaps less isolationism in the field of radiology than in any other branch of medicine."

The foregoing points constitute a resume of the radiologist's services and functions in modern medical and hospital organization .

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Halfway Through

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It is a most difficult task to give an objective and dispassionate account of the progress of surgery during the first half of this Twentieth Century. It is more difficult because I have lived in it and been a part of it. Proximity frequently distorts one's perspective; and events and personalities seem to pass in review like the images on an old magic lantern. Some reflections are clear cut and vivid while others are ill-defined and hazy. They are often distorted by the view of the recorder and the focus of the illuminator.

In spite of the interruption of our progress by two world wars and a confused struggle to avoid a third, we have made more progress in these fifty years than were made in the previous two hundred — truly a Golden Age in Surgery, a time greatly enriched by many splendid adventures into science.

When I began my preparation for a surgical career, this century was in its first decade; progress in many fields was definitely on the march. The first indoor automobile show was held in Chicago's Grant Park in 1910 and the next year an aeroplane exhibition was thrilling the same crowds. Moving pictures were still very shaky, talking pictures were inarticulate and radio and television had not yet wrecked the study hours of our children.

In the early nineteen hundreds, Listerism had been replaced by aseptic surgery. Berlin, London, and Vienna were the great centers of surgical teaching and we, younger men, were streaming to the old world for our post-graduate study. In the United States, great clinics were growing up in Baltimore, Philadelphia and New York. However, it wasn't long before the Middle West began to attract its share of attention. The Mayo Clinic was bringing Rochester, Minnesota into prominence and Christian Fenger in the Cook County Hospital carried on investigations in surgical pathology which had been popularized by Samuel D. Gross in Philadelphia. Fenger's tireless study of gallbladder disease, urinary tract, and pelvic diseases influenced many of the men who came to his clinics. Surgical pathology soon took its place beside anatomy as a "must" subject for the trained surgeon. Today Illinois can boast one of the greatest medical and surgical centers the world has to offer.

Our advances have come almost uniformly through the work of individuals but this brief record cannot pay tribute to all those to whom so much is due. It is possible only to mention some important events that influenced our thinking in Illinois during the period about which we are speaking. I have in mind the American Medical Journal; the Archives of Surgery; Surgery, Gynecology and Obstetrics; the American College of Surgeons and the International College of Surgeons; these had their birth in Illinois during this half century.

The human race is centuries old but scientific surgery is still very young. The technical achievements of surgery can never grow as science can because technical proficiency dies with the surgeon while the results of scientific progress can be handed on to the next generation like the baton in a relay race. It is difficult to sketch the contributions of science to the practice of surgery during this half century. Our semantic limitations have led us to select the term "surgical physiology" to cover the adaptations of biophysics, biochemistry, electronics, enzymatic chemistry and hormonal chemistry to our surgical uses. As our knowledge increases many diseases will cease to be treated by surgery but there will remain many defects which will require the surgeon's attention.

Today we are performing operations which no one would have dared to attempt twenty years ago — not because surgeons are more dexterous but because patients are better able to withstand operations. Operations that would have been doomed to failure before the development of our

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present methods of pre and post-operative care, are now everyday accomplishments.

In 1937 America's first blood bank was set up at Cook County Hospital and served as a pattern for hundreds of similar banks that soon followed. Its great importance can better be understood by looking at a specific hospital's records. During 1949 in Wesley Memorial Hospital in Chicago, 2800 pints of whole blood were drawn from donors and given to patients. During the same year 28,000 pints of other life sustaining fluids were given intravenously to patients whose blood deficiencies were a handicap to their recovery.

Surgery has made great progress since the discovery and controlled use of the bacteriostatics and antibiotics. Imagination can hardly cope with the dramatic results which have become daily experiences. Appendicitis which annually exacted its toll of deaths has now been reduced in mortality to less than one fifth of what it was ten years ago. Large bowel surgery has lost many if its limitations because we can now practically render the tract sterile. With the danger of infection removed, the surgeon has only to be a good technician. Post-operative pneumonias are seldom met, and if they do occur, antibiotics and bacteriostatics readily control them. We still have the massive lung collapses and atelectases as occasional complications, but the improved anesthesias and anaethetic agents have lessened their frequency.

The sudden death of a patient after an operation may come from an embolus which blocks the pulmonary artery. These unpredictable calamities are difficult to avert but we are making every effort to eliminate the factors which favor their occurrence.

In the time that is allo'ed to me there is little left to pay tribute to the surgeons of Illinois who have contributed to the progress of surgery in this past half century; surgeons who were great even among the greatest. Senn's illuminating researches on intestinal injuries and his bold dexterous surgery made his clinic a very attractive one for the visiting surgeon. Murphy was a common name but an uncommon man. His knowledge and ability coupled with a dynamic personality made him a great teacher and lecturer. His contributions to surgery can be recalled by all of us. Ochsner was not a great lecturer but he developed a great clinic during his lifetime. McArthur and Kanavel were men who made progress and left their imprints on the surgery of our time. If I were to speak of those who are still working, there would be no end to the list.

In recalling some of the great surgeons of the past and contributors to our progress in surgery, I am trying to rationalize the trend which surgery is now showing. There is an ever increasing tendency to specialization. Hand in hand with this tendency to superspecialization, there is growing an increasing number of self-appointed, self-perpetuating accreditative boards. This is having a definite effect upon the surgical profession and I seriously question that this effect is entirely favorable. These specialty boards have a great influence on hospital committees which set up the standards for staff membership. They must not become so short sighted that they compel young men to cast their lot with a restricted specialty before they have had an opportunity to survey the entire field of surgery and before they can possibly know what their personal attributes would best suit them to undertake. One is reminded of the similarity to the old world custom of making matrimonial alliances between young people before they were conscious of the opposite sex's charm and even before the biologic urge of the mating impulse was felt. The surgical profession should not follow this custom.

One cannot overlook the good that has been accomplished by raising the standards for those who practice surgery. We are likewise grateful for the careful scrutiny of the boards and committees which have improved the standards of our workshop — the hospital. We are, however, nearing the saturation level of accreditative boards and we should avoid a topheavy bureaucratic hierarchy which is foreign to our democratic concepts. What we are most concerned about is the overall service to the people of our communities. We must continue to give this nation the finest and most complete medical and surgical service that any country in the world has ever enjoyed. It will profit our profession very little if we impose too great restrictions on our young doctors and thus limit our ranks to the few aristocrats who can afford the costly years of non-remunerative training demanded by overzealous qualifying boards.

Nothing that we have done individually or as

a society has been as flattering to our profession as the attitude of the government at this time. The political leaders have come to realize almost precipitously that a healthy nation is a strong and productive nation. Success in preserving and fostering the health of our people would have great rewards if it could be made to appear that it was guided by a politically allied hand. It might help some obscure politicos to gain a respectable place in our nation's welfare. If we are short of doctors, hospitals and nurses as President Truman suggested in his speech on January 5, 1950, then we should recognize our weaknesses and correct them. However, we have more doctors per capita than any other nation in the world except Israel. There the situation is only temporary because it is the result of an influx of refugee doctors from all over Europe. If we were as short on doctors as the Government is long on potatoes and eggs, there would indeed be a need for some medical dictator who could be appointed through political patronage.

Our progress in surgery during the past fifty years is surprising even to us. We will have to readjust our surgical teachings and concepts as our knowledge of the causes of surgical diseases increases. We are conscious of the successes which are being made against disease and we can measure the benefits to mankind in longer years of healthful productive life. Our progress is outstripping the programs of the social scientists. We must readjust rapidly to plan for the top heavy old age group, growing much more rapidly than we planned.

Geriatric surgery will grow so rapidly that soon we shall have a specialty board in this branch of surgery. Life may begin at forty but more and more people are going to enjoy it after seventy. We are half way through this century of surgical progress and we can be exceedingly proud of all that has been accomplished but like the famous circus our achievements must grow bigger and better each year.

The future looks very bright if we can avoid the restrictions and chaotic conditions which might be produced by some unhappy form of socialized medicine. The next fifty years can make even greaters contributions than we have already had.

We hope that progress in pure science, from which much is expected, shall be devoted to the welfare of the world and its citizens rather than to the destruction of the things we have built and the lives of our people.

PROTEINS IN FOOD

The conception that the proteins contained in different foods differ greatly in nutritive value is of comparatively recent origin. Until the end of the last century investigators in the field of nutrition recognized the importance in diet of sufficient amounts of proximate principles: carbohydrates, fats, minerals, and proteins. The protein was, however, just protein and represented merely the nitrogenous element in the food. The realization that different foods contained proteins possessed of different nutritive or "biological" values was derived largely from the efforts of Max Rubner in Berlin, and his then assistant, Karl Thomas. By means of nitrogen balance tests upon himself, Thomas (1909) showed the differing capacity of proteins in different foods to replace the daily nitrogen expenditure of the body due to wear and tear of the tissues. The more important of the proteins thus tested were placed by Thomas in the following series of descending values: beef, milk, fish, rice, potatoes, oats, peas, white meat, flour, maize. With one or two exceptions this order has been confirmed by subsequent investigators. *Excerpt: Supplementary Nutritive Values Between the Proteins of Some Common Foods, Harriette Chick, D.B.E., D.Sc., London, J.A.M.W.A., Nov. 1950.*

Is Rheumatic Fever A Preventable Disease?

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Dr. McCulloch: I would like to begin the discussion of the topic of the present status of rheumatic fever therapies by answering the question which you have asked: rheumatic fever today is not a preventable disease.

In order to prevent disease we must understand its etiology clearly. The understanding of the etiology of rheumatic fever, however, is still "around the corner". Several ideas prevail and are emphasized to various degrees in various quarters. Of these, the most important ones are:

(1) Streptococcal infections.
(2) Growth.
(3) Emotion.
(4) Stress.
(5) Nutritional deficiency.
(6) Allergy.
(7) Heredity.

I shall briefly discuss each of the factors mentioned.

(1) Epidemiologic, clinical, and experimental evidence points towards the streptococcus as a major factor in the etiology of rheumatic fever. Usually a nasopharyngeal infection is followed by an acute attack of rheumatic fever after a latent period of varying duration. In many authentic cases, however, it has been impossible to demonstrate a streptococcal infection preceding the acute attack.

(2) Young people are especially susceptible and the chances of suffering a first attack of rheumatic fever diminish with advancing age. The chances are almost negligible after thirty years of age.

(3) Emotional conflicts have been incriminated as precipitating factors in acute rheumatic fever. It is true that some cases are suggestive of emotional involvement but they are rare.

(4) It appears possible that the factors 1, 2 and 3 — infection, growth, and emotional status — form a matrix which develops the clinical picture of rheumatic fever under the impact of stress. This, however, has the inter-relation of all of these factors.

(5) The role of nutrition in the etiology of rheumatic fever is ambiguous. Again, nutritional factors might be part of other factors previously mentioned. The incidence of rheumatic fever in war areas declined during the period when food supply was low and after a normal supply had been re-established; this, of course, cannot be regarded as conclusive evidence.

(6) Patients suffering from rheumatic fever appear to have a higher incidence of allergic manifestations in their personal or family history. Furthermore, it appears that a patient suffering from rheumatic fever has an altered reactivity of his tissues to various proteins.

(7) The significance of heredity in rheumatic fever is questionable and while important work has been done in the field its significance remains to be established.

To me, the word "prevention" implies a direct method of protecting the individual against a disease. The prevention of smallpox by vaccination is a good example of this concept. Our present thinking and our management of rheumatic fever deals with "control" rather than with prevention. Control should be directed towards all possible etiologic factors: if properly executed it lessens demonstrably the morbidity and mortality due to the disease.

At present three approaches to the problem

of the control of rheumatic fever predominate. First, the prevention of initial attacks of rheumatic fever in spite of the absence of more adequate knowledge concerning its etiology; our principle concern in this respect is the reduction in the number of infections of the upper respiratory tract by health education particularly concerning oral hygiene, adequate nutrition, proper medical care and the judicious administration of chemotherapeutic and antibiotic agents. Enforcement of this approach has produced a definite reduction in the morbidity of rheumatic fever during the past ten years.

Second, the prevention of subsequent episodes in patients who have already suffered from previous attacks. Again the elimination of upper respiratory infection by increase in a maintenance of the patient's resistance and by vigorous use of sulfa drugs or penicillin are the essential weapons available to us.

Third, the eradication of sources of infection within family units or communities in which the disease prevails. This task — the supervision of children and adolescents and the education of their parents rests, of course, largely with the family physician.

Each of the factors which I have mentioned is at present subject to close scrutiny and experimental investigation. The importance of heredity, for instance, is being studied by the New York Heart Association who follows four thousand sets of indentical twins. As yet no conclusive results have been reported.

In summary then I feel that rheumatic fever is not preventable at the present time but that it is controllable provided we make concerted efforts to control it.

Dr. Harry F. Dowling: Professor of Preventive Medicine, University of Illinois. In my reading I noticed two schools of thought regarding the efficacy of penicillin in lowering the incidence of rheumatic fever following streptococcus infection. Ramelkamp and others have committed themselves strongly in favor of penicillin whereas Weinstein feels that the results are not significant. How do you feel about these opposing views?

Dr. McCulloch: I am familiar with several studies using sulfadiazine and or penicillin which have been well controlled. Most of these studies agree with those of Ramelkamp, namely, that these drugs are of definite prophylactic value. I am inclined to agree.

Dr. L. A. Selverstone: Instructor of Medicine. I would like to ask two unrelated questions — first, are there any damageable changes in the nutritional status of the child who suffers from his first attack of rheumatic fever? and second, does your experience coincide with Taussig who believes that congenital heart disease pre-disposes to rheumatic fever?

Dr. McCulloch: The child who develops rheumatic fever may be underweight, overweight, or within the normal range. Most of the children as a matter of fact appear to be overweight. But weight of course it not necessarily an index of optimal nutrition. As for the second question, my own experience with congenital heart disease is not sufficient to answer it with any degree of certainty.

Dr. Robert L. Grissom: Assistant Professor of Medicine, University of Illinois. Have you seen untoward effects of the sulfadiazine prophylaxis?

Dr. McCulloch: No, we have not seen any. Actually we are now following one hundred fifty patients and are so confident of the innocuousness of the procedure that after an initial period of observation we have dispensed with any routine laboratory studies during the periods of administration.

Dr. Ford K. Hick: Professor of Medicine, University of Illinois. What is your dosage schedule?

Dr. McCulloch: Before we place a child on prophylactic sulfadiazine he must satisfy four criteria: first, he must have at least two attacks of rheumatic fever or must have clinical signs of heart disease; second, the family must be cooperative and willing to maintain prophylaxis for two or more years; third, he must have a reasonably clear nasopharynx; and fourth, other children in the family must be examined and nasopharyngeal defects corrected. For children under ten years of age we give .25 grams every 12 hours. For children over ten years of age give .5 grams every 12 hours. This is given continuously until the conclusion of the second spring season following onset of rheumatic fever. If a respiratory infection develops sulfadiazine is discontinued. The physician would then use penicillin during the respiratory infection. No treatment is given during the latent phase. Sul-

fadiazine is again restarted at least three weeks after the respiratory infection at the same dosage level provided there is no recurrence of rheumatic fever. If the four criteria are not met sulfadiazine is not given, but we feel that penicillin should be administered during any acute respiratory infections within the group.

Dr. Hick: Are you assuming that streptococci are the only responsible organisms?

Dr. McCulloch: I hesitate to answer this question because my answer would be based on institutional studies which are not comparable to conditions encountered in general medical practice.

Dr. E. Philipp: New Zealand, Guest of the Seminar. In Wellington, New Zealand, a district in which nutrition is satisfactory, we do not see much rheumatic fever under ordinary circumstances. Last year however, a new strain of streptococci was imported and resulted in a violent epidemic of upper respiratory infections. Several months later an epidemic of rheumatic fever followed. In this case the organism appeared to be the important factor and nutrition did not seem to be of any significance.

Dr. McCulloch: In summary I shall reiterate that we are unable so far to prevent one phase of rheumatic fever — the first attack. We are however able to reduce the number of recurrent attacks at least by one-half. Thus the disease, though not preventable, is at least in part controllable and I feel that the future is full of hope.

Benign Tumefactions of the Breast

(Benign Changes Simulating Tumor)

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The purpose of this discussion is to outline certain pathological and borderline physiological conditions of the breast which have been inexplicably named chronic cystic mastitis at one time or another.

We shall try to separate them for their better understanding, realizing at the same time that it is possible, even usual, for more than one type of change to be present in the same breast. It is to be emphasized at the outset that breast tissue, like any other tissue, is not affected uniformly by pathological changes, but if anything, the changes are less uniform than usual, frequently giving rise to puzzling pathological pictures. In the instance of this tissue even the normal physiological changes are not uniform, nor is there much general concurrence in the anatomy of the normal cyclic changes.[11, 13, 14, 15]

From the numerous studies made the following are fairly constant normal findings. The tissues of the breast enter into two fairly distinct but very overlapping phases, the menstrual phase, lasting from about one week before menses to two or three days after menses, and the intervening period known as the intermenstrual phase. During the menstrual phase there is increasing enlargement and vascularity of the breast, and variable darkening of the areolae. Microscopically there is an increase in loose intralobular connective tissue, the cells of which are fusiform and stellate, giving a myxomatous appearance. This tissue occurs about the acini and lobular tubules and is quite well demarcated from the denser interlobular connective tissue by its looseness, a relative basophilic appearance and the course of the fibers. With the onset of the intermenstrual phase, the breasts decrease in size.

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the myxomatous connective tissue becomes more compact and assumes an acidophilic staining reaction. Changes in the epithelial structures are described, but are not constant for any phase, nor throughout any one specimen. It is felt that many mistakenly assume that there is a constancy.

The possibility of cyclic changes in the epithelium may be admitted only if it can also be assumed that there is a markedly varied susceptibility of individual lobules to the stimulus and also that the intermenstrual regressive changes are varied.

The lobule is outlined by specific connective tissue as noted and may even be discerned in marked regression of the breast. The acini are lined by a single layer of cuboidal cells with a hyaline basement membrane, and surrounded further by a single layer of long fusiform cells, often having the appearance of smooth muscle. The number of acini per lobule during active sexual life is extremely varied. Before the acini are fully developed, they occur as buds, small compact masses of cells, which also are frequently seen during the intermenstruum. There are several tubules (ductules, canaliculi) in each lobule which connect the acini to the smallest ducts. These are of the same or slightly smaller diameter than the acini, and the cellular composition is similar. Occasionally a second layer of flattened parietal cells is seen in the tubules. The ducts are lined by columnar cells of moderate height, and a second layer of flattened or polygonal cells. Tangential cutting may give the false appearance of hyperplasia. The basement membrane is distinct and surrounded by one or more layers of flattened cells sometimes resembling smooth muscle (myoepithelium).

Secretory changes take place in the acini, tubules and small ducts, the cells becoming more pale and producing coarse vacuoles. The nucleus is enlarged and a distinct nucleolus is seen. Lumens will contain a pink homogeneous material and a few round colostrum cells. Certain changes occur in these structures, just mentioned, to give rise to the pathologic changes to be discussed.

1. *Enlargement of the pre-menstrual type.* This is most commonly called mastodynia, symptom, so named, it is presumed, because the morphologic changes are usually more obscure than the clinical changes. This condition is complained of most frequently during the pre-menstrual and menstrual phases, though this is not necessarily so. Medical attention is usually sought because of the pain, discomfort, fullness, or persistent enlargement. It occurs most frequently after full sexual maturity during the third and early fourth decades often in well-developed women with apparently well-developed breasts. Most of these patients have histories of endocrine difficulties with shortened, frequently painful menstrual periods and are usually nulliparous. Symptoms and signs of pelvic congestion are frequently associated. The breasts present a characteristic lumpiness. The impression on palpation is that one can feel the entire limits of the breast as a thickened disc, some parts of which are harder or lumpier and are seemingly detached. The condition usually is bilateral. These lumps, so obvious clinically, disconcertingly disappear in the post-operative specimen. Frequently this condition occurs in breasts that are not so well-developed, and in which the lumps may be much smaller, so one may surmise the correct diagnosis by the age, cyclic nature of the changes, and pain, in the absence of other patent findings. The sectioned surface reveals increased amounts of fibrous tissue in which tiny gray nodules may usually be discerned.

Microscopically there is an increase in the myxomatous-appearing intra-lobular tissue with irregular lobule formation. Frequently there is a proliferation of acini without epithelial changes. Increased secretory activity is also frequently seen. Vascular engorgement seen clinically may not be so arresting under the microscope. In chronic cases there is a marked increase in fibrous tissue in both the inter- and intralobular areas.

Some people see a possible relationship between this and "adenosis". It is felt that mastodynia may be a fore-runner since it is frequently associated with the typical cystic changes of the latter especially older cases, and because of the similar low pregnandiol excretion levels. However, a certain similarity to fibroadenomas must also be noted, since these occur in similar age groups and the type of connective tissue proliferation is similar. Cyclic changes occur in both, and fibro-adenomatous areas are not too uncommon in long-standing cases of mastodynia. Furthermore, it might be noted that

adenosis cysts are found with a fair degree of frequency in any breast, especially from the fourth decade upward.

2. *Interlobular and lobular fibrosis.* This is not strictly speaking a disease process, but a result of aging or involution. It occurs in the older age groups from about 35 on to old age. It is often noted, too, in younger multiparous women. No significant cyclic changes are seen. Mastodynia is usually absent, but this varies with the neurotic tendencies of the patient. This condition is considered separate, but is often associated with other findings. It may be considered physiological, but is often so marked that it must be differentiated from tumor.

The breasts are generally flabby, but may be full in accordance with the nutritional status of the patient. The outline of the breast cannot be felt. It is usually described as shotty, but linear corded increases in consistency seem to follow the direction of the ducts. Occasionally distinct areas of lumpiness are found, but these in the absence of other pathology will be found on finer palpation to be the usual fibrous shotty tissue. The condition is bilateral and symmetrical, though an asymmetric picture is afforded by the presence of cysts or other pathology. The cut surface reveals an increase in dense white fibrous tissue which is glary, soft, and moist-appearing. Small dilated acini and ducts, not realized on clinical examination, are common. Microscopically there is a relative increase in the amount and density of the interlobular fibrous tissue. The intralobular fibrous tissue has become condensed, but is usually still distinct from the interlobular fibrous tissue by the course of the fibers. The acini are decreased in number in most lobules and frequently appear to be confluent. The vascularity is noticeably decreased. It must be remarked that breast changes are still haphazard and many well-developed lobules will be seen. So, if these observations are correct, what we see is similar to involutional fibrotic changes seen elsewhere. With a declining stimulus there is a decrease in the functioning tissue and in its blood supply and there follows arteriolar thickening and fibrosis. The changes so far described are in a sense physiological with an excess of these changes occurring in some instances.

The changes next to be described are not easily reconciled with normal physiology and are sometimes nearly or frankly neo-plastic. Again the breast defies man's natural inclination to conceive of all processes as being orderly. Therefore descriptions of these conditions are at much variance.

3. *Cystic disease.* This condition occurs most frequently during the fifth decade, but is not at all uncommon in the fourth and less commonly in the sixth decade. Of special diagnostic aid, when the history is reliable, is a history of a sizable tumor developing within a comparatively short period of time, often less than one month. As stated before, cysts occur which may be so small as to be not detectable. As seen clinically they are large and usually cause asymmetry of the breast. Frequently the condition is bi-lateral, and the cysts are palpable as single or multiple mobile rounded masses. The finding of fibrosis are almost a constant accompaniment. The sectioned surface will reveal the famed blue-domed cysts, and the ususal finding of fibrosis, as just described. The microscopic picture is most varied. There will be the increased inter- and intralobular fibrosis, numerous normal-appearing lobules, but in general the lobules will be atrophic. The typical cyst is rounded; often the epithelial lining is lost when the cyst reaches from 10 to 15 mm. in diameter. Usually in the region of the large cyst are numerous small cysts, generally in groups and having a flattened epithelial lining. Serial sections show that the cysts are rounded, dilated spaces, generally confluent with ducts. About the border are scattered numerous acini, generally without tubules. Judging from the configuration it is possible that the cysts represent dilated ducts and tubules with participation of the acini in their formation. In most cases of typical cystic disease there is found an associated cystic disease of another type to be described. This is the

4. *Metaplastic cyst of the sweat-gland type.* This associated cyst formation is quite different in appearance from that described above. The cystic spaces are irregular in outline, generally confluent. These do not appear rounded and distended and even in the formation of very large cysts its epithelial lining is retained. The lining is composed of a single layer of tall columnar acidophilic cells whose nuclei are generally,

but not necessarily, basal in position. At somewhat regular intervals there is seen a piling up of cells frequently with the formation of true papillae or plicae. Not uncommonly the immediately surrounding stroma exhibits good vascularity with secretory activity being present in the near-by breast tissue.

This metaplastic type of tissue when extensive and showing extreme hyperplasia presents the picture of what is variously known as Schimmelbusch's disease, Reclus's disease, or adenosis. The chief clinical aspects of this last condition are as follows: It occurs most frequently in the fourth and fifth decades in thin nervous women with small breasts, the upper outer quadrants of which can usually be outlined by palpation as a somewhat discrete mass of small cysts and is bi-lateral in at least half the cases. Pain is a fairly frequent complaint, but is by no means usual. There is also frequently a history of menstrual irregularity, and low fertility. This condition should be considered as an epithelial neo-plasia in contrast to the typical blue-domed cysts. Microscopically the epithelial proliferation is very marked with frequent bridging of the alveolar spaces and the presence of desquamated cells. Dilatation of terminal tubules, ducts, and lobules is also commonly seen, along with increased interlobular and intralobular connective tissue. Frequently cellular debris and other detritus become impacted in the ducts, giving rise to what is known as comedo-mastitis. It is felt that it is this detritus which evokes a chronic inflammatory response which may be responsible for the term mastitis.

5. Hyperplasia. The term as used here refers to a hyperplasia of the ducts and bears no obvious relationship to the above conditions. It is seen in the more atrophic breast of patients of an older age group, and is generally not clinically detectable. It is associated with old, retained, and inspissated secretions. Microscopically there is an epithelial hyperplasia, the cells of which are usually hyperchromatic, and often neo-plastic in appearance. This picture is often found in association with carcinoma of the breast. There is some opinion that this may be a definite pre-cancerous lesion. The connective tissue has become collagenous and quite dense, and reduced in vascularity. Well-developed lobules are rare; however, the hyperplasia seems to be most marked in the lobular areas.

It is obvious, and consistent with most views, that the term "chronic cystic mastitis" when it includes all of the described conditions is without meaning. Yet, this terminology persists because of the lack of any generally accepted classification. It is thought that much might be gained if the main pathological changes are reported to the surgeon in terms that are meaningful to him. The shortcomings of such a procedure are patent, but at least the physician could then recognize the kind of process with which he is dealing. This variously-interpreted term has given rise to greatly conflicting reports, and has prevented the proper use of much information already uncovered.

In mastodynia fairly consistent low urine pragnandiol levels have been found by some investigators[12, 26], thus pointing to depressed corpus luteum function as a possible cause. Progestrone during the lasthalf of the menstrual cycle has been used successfully in the treatment.[12] Chorionic gonadotropin has also been used.[25] However, all investigators have not found abnormal pragnandial excretions.[24] It has long been observed that castration and menopause have been followed by relief [22, 24], so a factor of hyperfunction may also be present. In fact, it appears that an active ovary, producing estrin, is necessary for this condition to develop.[5] Local inunctions as well as injections of testosterone[21, 18] have given relief for periods of several months. Estrogens are contra-indicated.[9]

Fibro-adenoma has been thought to be due in some way to ovarian hyperfunction since it occurs only after puberty and before menopause. This growth also is aggravated by pregnancy. However, it is found more frequently in nulliparous patients[24] and the estrogen excretion of patients with fibro-adenoma has been found to be the same as in normal controls.[22]

In cystic disease there seems to be no consistent change in estrogen secretion,[22] however it has been shown that estrogen injections in animals cause cyst formation.[12, 24, 17] It is also observed that cystic disease tends to disappear with pregnancy. I do not believe that any very satisfactory treatment has been devised other than surgery. Treatment with estrogens has been observed to increase the symptoms.[19] It

must be remarked that the diagnosis of cystic disease *does not rule out cancer,* and that its peak of incidence corresponds to that of cancer. It has been found by various investigators that cancer occurs from two to five times as frequently in breasts with cystic disease.[12, 24,] etc. In the definitely neo-plastic condition of adenosis or Schimmelbusch's disease there has been thought to be an estrogen-progesterone disproportion[24, 26] with either an absolute or relative decrease in progesterone. Success in treatment has been claimed by the use of progesterone in the latter half of the menstrual cycle.[27]

However, in spite of the great volume of work that has been done to try to determine the relationships between breast changes and ovarian hormone functions it still must be remembered that any such relationships are probably indirect. Perhaps this accounts for the many differences of opinion noted in the literature. It seems almost certain that any ovarian hormonal effects are mediated through the pituitary gland.

CONCLUSIONS

It is argued that the term chronic cystic mastitis should be abandoned as a useless and harmful term. Furthermore, because of the immense nomenclature now applied to these various benign tumefactions of the breast and because of the great difficulties arising therefrom, it would seem better to revert to a description of the main pathologic picture and abandon names as much as possible.

DISCUSSION

Dr. Chandler Foot [New York City]: I think this is a very important paper and a very thoughtful analysis of the borderline between the normal breast and the carcinomatous breast. Not that I infer that the condition which Dr. Dolan described necessarily leads to cancer. I simply mean that lesion lies on the borderline.

The first mention of differences in the mammary epithelium during the menstrual cycle probably was published by Rosenberg well over thirty years ago. It was published under a most outrageous preface by the director who conducted the laboratory where Rosenberg was active.

Rosenberg hinted that he thought there was a hormonal activity, but hormones at that time had not been described or discovered and it was this thesis that was attacked by the director of the laboratory in his preface.

I called that article to the attention of Drs. Stewart and Foote in the Memorial Hospital and they began to correlate what they found in their sections of breasts with the history of the patient to see if there was any relation between the phase of menstrual cycle and the condition and appearance of the breast. That led to a very pleasant sport because they began laying bets on the phase of the menstual cycle and following that up in the history and the victor collected from the loser.

But they found there was a very definite connection between the phase of the menstrual cycle and the appearance of the breast. That is, that in the intermenstrual period many female breasts reverted to an almost masculine type.

Then, menstrual hyperplasia is a dangerous condition in the hands of some pathologists; one particular case comes to my mind where a young girl just married and twenty-two years old had a biopsy on her breast occasioned by some pain so that she wanted to have investigated. The local pathologist had read about carcinoma in situ. Fortunately the attending physician sent the young lady with the slides to the Memorial Hospital and Dr. Stewart sent her over to me to get some backing up. They were going to perform a radical mastectomy on this very handsome, newly-married young girl, whereas there was nothing wrong with her breast except menstrual hyperplasia.

Thus it behooves us to study these conditions and know them and be familiar with them.

I am very glad to hear you say that you don't consider the normal cells of hyperplasia sweat glands. Blood, sweat and tears may mix, but milk and sweat is a poor mixture.

Of course, we can't argue logically that way, but nevertheless it has always been very puzzling as to why we get this apparent sudoriparous tissue mixed in with the mammary tissue and I think it is just a matter of both the sweat glands and the breast that arises from similar anlagen or primordia and that it is primarily a similarity rather than an identity.

I am also interested to hear your remarks on precancerous lesions. It seems to me that we see cancer follow this group of fibrotic diseases — I think that is a better name for them than "chronic fibrous mastitis" — I think we see it much more often in this case than we do following intercanalicular fibroadenoma. I don't believe that that usually precedes carcinoma by any means.

Now, the last thing I wanted to point out was that in this condition the Papanicolaou method is being tried out. That is, gently expressed or aspirated secretion will give an idea as to what sort of cells are being desquamated, particularly in these desquamative conditions where that is a marked feature, and they can be readily recognized. Carcinoma, is not ruled out, but at least an indication of the absence of carcinoma is obtained. When carcinoma is present its cells do come down in the ducts

I don't know whether we should do much expressing of mammary secretion in the presence of carcinoma. I think it may be a dangerous procedure, but I am merely mentioning to you the fact that we have had definite positive findings in

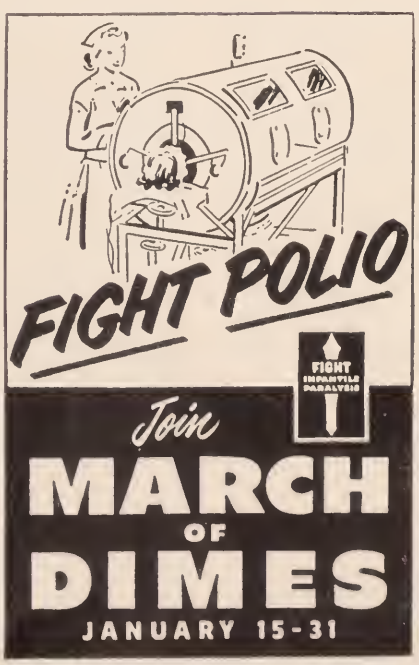
expressed mammary secretion. Probably a breast pump may be safely used.

Dr. Simonds (Chicago, Illinois): Dr. Foot's remarks about trying to express secretion out of the carcinomic breast are well taken. The results of the study of transplanted tumors were, in general, disappointing. But one most important fact was learned from this source. Transplanted tumors do not ordinarily metastasize, but can be made to do so by rough handling. Rough handling of a carcinoma of the breast may increase its tendency to metastisize.

Dr. Dolan: Well, I'd like to make a remark about Rosenberg's paper. Undoubtedly the greatest contribution made was the recognition of hormonal effects upon the breast. However, I think that when one reads the paper he is misled a great deal in that Rosenberg outlines the changes in the breast as being a good deal more distinct, I believe, than they actually are, and for that reason I think it has confused the subsequent literature for quite a number of years.

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CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Bacterial Aortitis At Site of Coarctation Of Aorta, Completely Occluding It

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Coarctation of the aorta is divided into two types, the infantile and the adult[1], and the degree of narrowing in either type, may vary greatly[2]. Since the clinical signs of coarctation result from the narrowing of the aorta, a patient with slight or even moderate constriction may go through life without signs or symptoms. However, clinical manifestations may take place in such a patient, should the degree of narrowing become aggravated either by thrombosis or vegetations at the site of the coarctation. The latter occurred in our case.

One of the less frequent complications of coarctation is bacterial aortitis at the area of constriction[1, 2, 3, 4]. Another site for bacterial involvement is the associated bicuspid type of aortic valve, which is not infrequently seen in patients with the adult type of coarctation [2, 3, 4, 5, 6]. Scattered through the literature are reports of coarctation of the aorta with or without associated bicuspid aortic cusps, harboring bacterial vegetations on one or both of the congenital deformities.

Reifenstein, Levine and Cross[7] reviewed a series of 104 autopsied cases of coarctation of aorta which had been reported since 1928. They found bacterial aortitis, unassociated with endocarditis in six patients. In two instances the vegetations were on the ascending aorta, and in the other four, just distal to the area of constriction. They cite a single case with aortitis and apparent recovery one year after massive penicillin therapy. Several patients had bacterial endocarditis and an associated bacterial aortitis. The endocarditides were mostly on the bicuspid aortic leaflets, although in few instances, the mitral valve only was involved.

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A twenty year old white male entered the Cook County Hospital on November 11, 1942, because of anorexia, lassitude, weight loss, night sweats and fever of six weeks' duration. He had always previously been in perfect health. In high school he had taken an active part in all sports and was considered to be the best athlete in his class. Two years ago he was refused employment in several places and was told that he had rheumatic heart disease. This was a complete surprise to him. He had never had rheumatic fever or any other serious illness, to his, or his mother's knowledge.

About two months before entry he gradually began suffering from the symptoms mentioned above and in the last four weeks he definitely became worse. He had no preceding "colds", tooth extraction, venereal disease or any other illness.

About three weeks before admission he accidentally fell off a stool, struck his back on the floor, but did not lose consciousness. However, he was unable to move his legs for about thirty minutes. After that, he got up and was able to go home by car. From that time on he remained with lumbar back ache and some stiffness and numbness in his lower limbs, intensified by motion. Five days prior to entry, he experienced sudden sharp pain in the L.U.Q. aggravated by motion, deep breathing and turning in bed.

Examination revealed an ill, pale and anxious-looking young man. Temperature was 101°F and respiration 20. The pupils were normal. There was a slight icteric tinge to the sclerae. There was one small petechial hemorrhage in the conjunctiva of the right eye. There was a questionable petechial hemorrhage on the palate. Pallor of the mucous membrane was marked. The pulse was 110, regular and of the Corrigan type. The blood pressure was 150/30. There were no palable lymph nodes, and the lungs were clear. *Heart* borders were 3 x 13 cms and there was questionable fullness in the third left interspace. A short systolic thrill over the aortic area and the episternal notch was palpated. There was a fairly rough systolic murmur and a mid-diastolic rumble at the apex. The first sound was not loud. A short but rough systolic and a long blowing diastolic murmur were elicited over the aortic and pulmonary areas. P_2 was greater than A_2. *Abdomen* — there was diffuse tenderness. The liver was not definitely felt, but the spleen was felt one fingerbreadth below the costal arch. *Femorals*: Pulsation was very weak. The blood pressure was not obtainable. The dorsalis pedis were not felt. The lower extremities were, however, not cool to touch and the color was fairly normal. There was no edema of the back or of the lower extremities. The reflexes were sluggish. Examination of the back revealed tenderness in the lumbar region but with no definite localization. Collateral circulation of upper and lower thorax was neither felt, nor seen.

Laboratory Findings: Urine: Sp.Gr. 1.015: albumin-2; RBC-4-6 per H.P.F.: WBC-Just a few. The blood showed hemoglobin 40%; RBC 2,100,000; WBC 6800: P. 76%; L. 13% M. 11%. Total protein-5.3; albumin-3.2 and globulin-2.1. The N.P.N. was 124 mg and creatinin 8.3 mg. Wasserman was 3 and Kahn was doubtful. The blood culture was repeatedly negative.

DIAGNOSIS: The following was considered: (1) rheumatic heart disease, mitral stenosis and insufficiency; aortic stenosis and insufficiency: subacute bacterial endocarditis and multiple embolization to spleen, kidneys and possibly muscles of the back, and thrombosis of abdominal aorta at the bifurcation, secondary to an embolus (very rare complication), being responsible for the weak femoral pulsation: (2) or coarctation of the aorta with bicuspid aortic cusps, the latter, or the constriction, or both sites harboring the bacterial endocarditis, thus accounting for the entire clinical picture.

COURSE: Blood transfusion and sulfonamides were immediately started. In several days the sulfa blood level indicated adequate dosage but the patient failed to rally. He was too weak to be transported for an x-ray of his ribs. He continued throwing emboli and died in four days.

AUTOPSY FINDINGS: (Dr. W. Schiller) *Heart*: 580 gms. The walls of both ventricles were thicker than normal. With the exception of the aortic cusps, the valves were normal. No thickening of the leaflets or cordae tendinae of the mitral valve was seen. The aortic valve had two cusps, the two posterior cusps being represented by a single wide one. In the corresponding sinus of Valsalva a white longitudinal ridge about 2-3 mm. wide in the aortic portion of its wall nearer one commissure than the other was seen. The anterior cusp was normal in size. However, on the ventricular aspect of the cusp and downward over the adjacent portion of the



Figure 1. High origin of the coronary artery, bicuspid aortic valves with vegetations and hypertrophy of the left ventricle are seen.

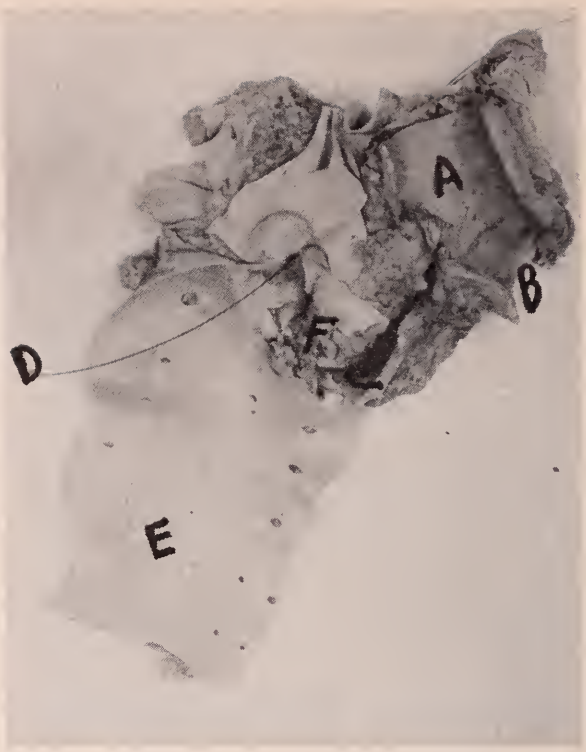


Fig. 2. A — trachea. B — right main bronchus. C — left main bronchus. D — probe in patent ductus. E — aorta. F — vegetation at site of coarction.

wall of the left ventricle there was a mass of yellowish-brown friable material, 1 cm, in its greatest thickness, 3 cm. in length and 2.5 cm. in width. (Figure 1). This vegetation sealed together the two cusps of the aortic valve at one commissure. At the other commissure there was wide separation of the two cusps (2-3 mm.). The free margin of the larger cusp showed moderate thickening. On the ventricular aspect of the cusp a thin layer of yellowish brown material was noted, at and just below the free margin (Figure 1). The anterior sinus of Valsalva revealed an out-pouching of the aortic portion of its wall. This outpouching was about 9 mm. in in diameter. A small amount of friable material lined this out-pouching. It was situated approximately at the usual site of the orifice of the right coronary artery.

Further inspection of the anterior sinus of Valsalva revealed an out-pouching of the aortic aspect of the anterior cusp. At the base of this out-pouching there was a rent through the valve substance and vegetation. There were no antemortem clots in the heart cavity. The orifices of both coronary arteries were higher than normal, but both were patent. The coronary arteries and the branches were normal. There was acute fibrinous pericarditis.

Aorta and Pulmonary Artery: Immediately distal to the origin of the carotid and the left subclavian arteries, the lumen of the aorta was completely occupied by a mass of friable, yellowish, brown material attached to the posterior and postero-inferior portion of the wall of the aorta (Figure 2). Where attached, there was a thin outpouching in the wall of the aorta 7.5 cm. in diameter. Just proximal to this outpouching, the aorta measured 2-2.5 cm. in circumference. Just distal, it measured 6 cm. in circumference. A small somewhat dimpled plaeque 1-2 mm. in diameter was noted in the wall of the pulmonary artery at the usual site of the orifice of the ductus arteriosis. A fine probe (1 mm. thick) was inserted beneath the plaeque and readily passed from the pulmonary artery to the aorta (Figure 2). The aorta was otherwise normal. No atheroma was present. The orifices of the intercostal arteries were not larger than normal. Palpation revealed no erosion of the inferior aspect of the ribs.

MICROSCOPICALLY: There were miliary abscesses and infarcts (embolic) in the myocardium; infarcts to the spleen, central necrosis and edema of the liver; subacute glomerulonephritis, acute focal pancreatitis, and necrosis of aorta with neutrophilic infiltration. The anatomical diagnosis was as follows: *Bicuspid Aortic Valve (congenital anomaly), bacterial endocarditis of aortic valve, mycotic aneurysms of the anterior aortic cusp, and of the aortic portion of the wall of the anterior sinus of Valsalva, rupture of the anterior cusp of aortic valve, mycotic aneurysm of the thoracic aorta just distal to the exits of the great vessels, moderate coarctation of aorta with bacterial aortitis at site of narrowing, minutely patent ductus arteriosus, hypertrophy and dilatation of the heart, embolic abscesses of left ventricular musculature, anomalous origin of the coronary arteries, acute fibrinous pericarditis (uremic), chronic passive congestion of viscera, infarcts to the lungs, spleen and kidneys, and diffuse glomerulonephritis.*

COMMENT

The coarctation in our patient was of low caliber, as attested by the absence of collateral circulation and erosion of the ribs and finally by the autopsy findings. It was only when the vegetation aggravated the constriction that clinical manifestations became evident, thus making us suspect the presence of a coarctation. Because of the rapidity of the process, one could not expect the development of collateral circulation as it typically is seen with pronounced stricture. We believe that his symptoms of stiffness and numbness of the back and lower extremities were not altogether due to his fall, but were in some measure caused by the rapidly accumulating vegetations.

While the mildness of this coarctation would not have predisposed our patient to heart failure, rupture of aorta or apoplexy — complications seen in the more severe type of coarctation — he was, however, not less predisposed to bacterial aortitis or endocarditis, or both as the course of events proved. In a sense, such a patient is worse off since his congenital deformity is silent and the infection is not recognized at all or too late to effect a cure. By contrast, the patient with pronounced coarctation may be better off, since he may reap the benefit of modern surgery besides being constantly watched for the development of an aortitis or endocarditis. It is possible that at present, early and adequate therapy in a case like ours could effect a cure. Such a case has been reported[7]. The minutely patent ductus was of no functional significance.

The interpretation of the murmur that led to the diagnosis of rheumatic heart disease elsewhere several years before the onset of his symptoms is difficult, since one does not know the type of the murmur found at that time. If it were denoting an insufficiency of the aortic valves one could speculate, in the absence of a rheumatic or luetic process, about the remote possibility of the bicuspid cusps causing it. Abbott found a diastolic murmur in one out of thirty-two cases with bicuspid aortic cusps[2].

Finally, the positive Wasserman was due to a false biologic phenomenon, seen occasionally in bacterial endocarditis.

CONCLUSION

A patient, with a mild coarctation, associated with bicuspid (congenital) aortic leaflets developed a bacterial aortitis and endocarditis.

The vegetations were present on the bicuspid aortic cusps and at the site of the coarctation, thus aggravating the latter.

The vegetations completely occluded the aorta, ultimately.

Mycotic aneurysms, one of the right sinus of Valsalva and another of the aorta were found.

Multiple emboli to the greater circulation took place. Uremia finally developed as a result of diffuse glomerulonephritis.

The diagnosis of coarctation with aortitis was considered during life and the possibility of associated bicuspid aortic cusps, also harboring vegetations, was postulated.

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CASE REPORTS



Incarcerated Traumatic Diaphragmatic Hernia

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Chicago

Diaphragmatic hernia is a term which includes various types of defects in the continuity of the diaphragm. A very excellent description and analysis of the types and their surgical importance has recently been written by Harrington. The most common type of diaphragmatic hernia is the esophageal hiatus variety which is a true hernia containing a sac which protrudes in the chest cavity. This form is amenable to surgery; however, we are not concerned with it in this report. The next most common is the traumatic type in which there is a cutting, tearing or bursting force which separates the fibers of the diaphragm, thus creating a defect. Usually, there is no sac associated with this type of hernia, thus in reality, it cannot be called a true hernia. Other varieties are congenital malformations which include pleuroperitoneal defects, subcostosternal defects and congenital absence of a portion of the diaphragm.

This case is being presented to demonstrate a condition which gave progressive symptoms and continued unrecognized for six years following a very definite incidence of trauma. The diagnosis is relatively simple after the condition has become well established and the surgical treatment is quite satisfactory. Such cases are of great interest because although symptoms may be minimal or absent the potential dangers involved are very grave. It is with this in mind that we wish to emphasize early surgical repair.

Case History: The patient, an eleven year old white male, entered the Michael Reese Hospital with a diagnosis of diaphragmatic hernia for surgical repair. His outstanding presenting symptoms were abdominal cramps which were intermittent and aggravated by ingestion of food, slight dyspnea on exertion, and an easily tired feeling which was noticeable because he couldn't main-

From Department of Surgery — Michael Reese Hospital.

tain the pace of playing with playmates his age. His parents stated that he was very skinny, he couldn't gain weight and that he had a very poor appetite. The past history revealed that six years previously, the patient was struck on the right side of the body by a concrete building block. This resulted in some broken ribs and an otherwise uneventful recovery. He was apparently well and had no complaints until about two years prior to his admission when his parents noted that the child became more easily fatigued and was more short of breath than were the other children with whom he played. His parents further noted that as he grew older he was not as robust and healthy looking as a normal boy his age should be. His appetite was always poor and he failed to gain weight. On varying occasions for the past few years he complained of abdominal pains and cramps; most marked in the epigastrium. The pains, however, were transient and apparently not too distressing. About one month before admission to the hospital after a large Sunday dinner he was seized with severe abdominal pains which were again mainly in the epigastrium and left upper abdomen. The pain was more persistent and was now associated with nausea and marked anorexia, but no vomiting. The pain was a cramping colic type, causing the boy to double up with discomfort. A physician was consulted at this time and although he made no definite diagnosis, his impression was a recurrent attack of appendicitis. The symptoms subsided spontaneously with conservative management. Later another physician was consulted and upon examining the child was greatly amazed to find the heart lying in the right chest, dullness and absent breath sounds, plus gurgling bowel sounds in the left chest. Fluoroscopy and x-ray revealed a dextro position of the heart which was secondary to abdominal contents in the left chest pushing it over. (See Figures 1 and 2 (B)). A further diagnostic procedure of barium enema was done which revealed a large portion of colon to be lying in the left chest (Figure 3). The diagnosis of traumatic diaphragmatic hernia was made.

The patient was prepared for surgical repair of the diaphragmatic hernia. Preoperative blood and penicillin were given. Under endotracheal ether and cyclopropane anesthesia, a left thoracic incision in the eighth interspace was made. When the chest was opened abdominal contents



Figure 1 — P.A. x-ray showing: Heart shifted to right, abdominal contents in left chest (arrow).

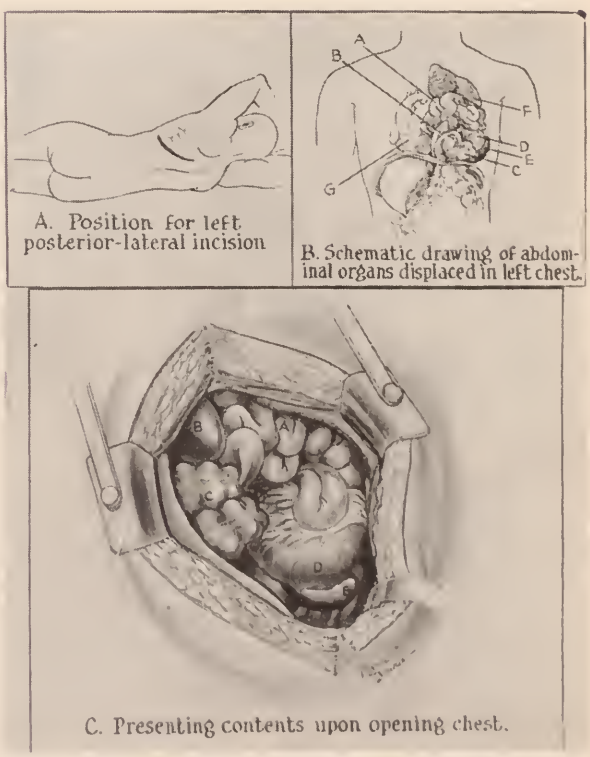


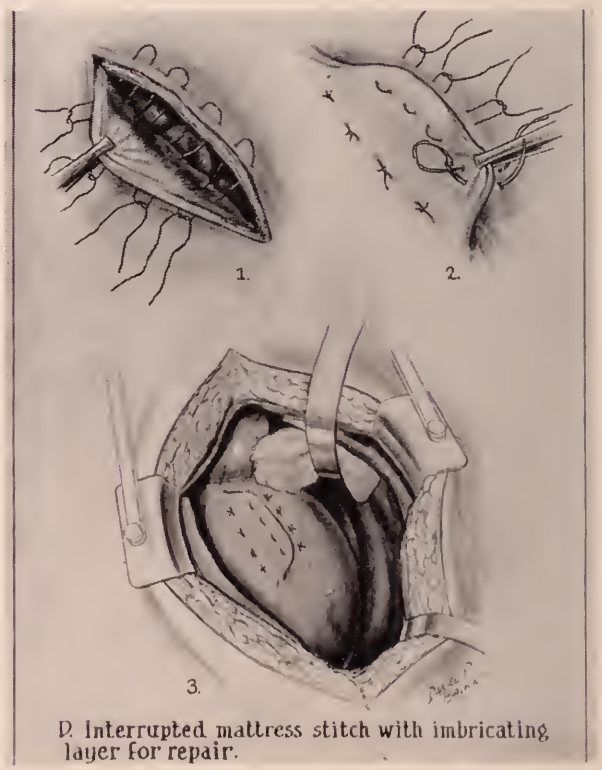
Figure 2, 2(B) and 2(C). A — small bowel, B — left lobe of liver, C — splenic flexure of colon, D — Stomach, E — Spleen, F — Lung.

presented. (Figures 2 (A) and 2 (C)). They filled the anterior and medial portion of the chest cavity to its apex. Large bowel (splenic flexure, transverse colon and descending colon), stomach, coils of small bowel, spleen, and left lobe of the liver lay within the chest. All these structures were presented through a defect in the dome of the left diaphragm which extended toward the left crus. The opening was five centimeters in diameter. The abdominal viscera were carefully returned to the abdomen without opening the diaphragm further. Minor adhesions were freed and the contents returned with minimal difficulty into the scaphoid abdomen which at once became flattened with its increased contents. The hole in the diaphragm was repaired with interrupted silk imbricating mattress sutures (Figure 4). Care was taken not to compromise the esophageal hiatus. The lung which was markedly compressed and atelectatic due to the crowding by the intruding abdominal viscera, expanded when increased intratracheal pressure was exerted from the anesthetist's bag. An indwelling catheter for under water drainage was brought out through a stab wound. Closure was made anatomically. A Levine tube was placed into the stomach for decompression. The postoperative condition and course was completely uneventful. The patient was ambulated the day of operation and was ambulant thereafter. Eight days post-operatively the patient was discharged. Follow up x-rays and fluoroscopy showed a complete return to normal of his chest picture. (Figure 5). The left lung was completely reexpanded and the heart was back to its normal position. One year later the patient had resumed complete activity and showed no signs of dyspnea or fatigue. He no longer had abdominal complaints, had an excellent appetite and gained weight. The boy now indulges in such active games as basketball and is completely asymptomatic.

Comment: Diaphragmatic hernia is a condition which is very frequently overlooked in the diagnosis of vague abdominal distress or vague cardiorespiratory symptoms. Although traumatic diaphragmatic hernia usually manifests itself early after the incident of trauma, it may as in this case, be silent for many years. In this case a period of six years elapsed before symptoms became distressing enough to warrant medical attention. The history of pre-



Figure 3 — Barium enema showing splenic flexure high in the left chest.



D. Interrupted mattress stitch with imbricating layer for repair.

Figure 4 — Method of surgical repair of the diaphragmatic defect.

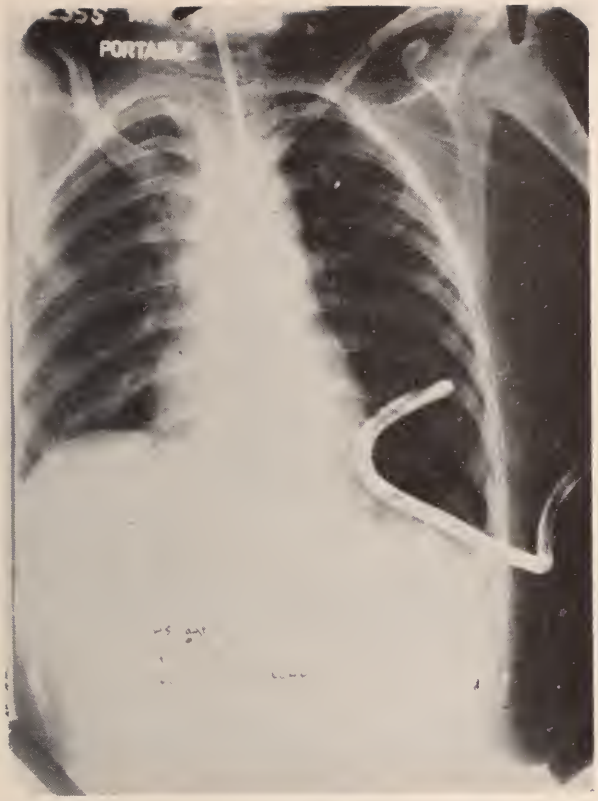


Figure 5 — Post-operative x-ray of the chest showing re-expanded left lung.

vious trauma was almost entirely forgotten by the patient and his parents.

The entire clinical picture and symptom complex become explainable when we correlate anatomic and surgical findings with the patient's complaints.

It is interesting that although the direct trauma was on the right side of the lower chest and upper abdomen the diaphragmatic injury is on the left. The bursting force was transmitted through the abdomen and resulted in a tear in the dome of the left diaphragm. This is the most common site of traumatic diaphragmatic defect — probably because the liver on the right buttress the right leaf of the diaphragm, whereas the left leaf is not buttressed.

The early picture after injury probably was one of a small diaphragmatic defect with very little, if any, abdominal viscera displaced with the left chest. Thus, there were very few, if any symptoms. However, as more abdominal organs crowded into the chest, symptoms developed. These symptoms are entirely mechanical in nature effecting (1) the gastro-intestinal system (2) the cardiovascular system (3) the respiratory system.

As more viscera crowds into the chest through a small opening in the diaphragm, one can logically conclude that these organs will have more difficulty returning to their normal abdominal position, and that, therefore, an increase in the intraluminal pressure of the hollow viscera such as stomach, small bowel or large bowel will naturally lead to incarceration. Thus we see in this case that the abdominal viscera crowded into the chest became incarcerated and would not reduce themselves. After ingestion of any food, especially after a large meal, the gastro-intestinal symptoms — cramps, nausea, anorexia, and even vomiting became most pronounced associated with distension of stomach and bowel. These are obstructive symptoms. It is entirely conceivable that the incarcerated bowel may be the site of strangulation, especially after the ingestion of any food and increased peristalsis. Indeed cases of strangulation of the stomach or bowel have been reported in the literature, although such cases are rare, the complication is of such a serious nature that unless immediate surgical intervention takes place, the condition may be rapidly fatal. Recently Dugan and Samson reported four such cases which they reviewed in the literature and added two more of their own cases of strangulated stomach. They emphasize the importance of early diagnosis and early surgical treatment of such cases. Harrington also emphasizes early repair of traumatic diaphragmatic hernia; in fact, as soon as diagnosed for two reasons, (1) to prevent the complication of strangulation and (2) because the abdominal organs lose their "rights of residence in the abdomen". Diagnosis can usually be made on physical examination and can readily be confirmed by chest x-ray and gastro-intestinal x-rays.

The cardio-respiratory picture is likewise easily explained. Crowding of the left thorax causes mechanical collapse of pulmonary tissue, in this case the left lower lobe and part of the left upper lobe were airless reducing markedly the vital capacity of the patient. Thus the boy found himself short of breath and easily fatigued when exerting himself in games with his playmates.

Also shift in the mediastinum and heart to the right can cause embarrassment of the circulatory

system and add further to the picture of cardio-respiratory distress. Post-operatively the left lung is re-expanded and the heart and mediastinum return to their normal position. The patient is freed of symptoms.

Although there is a difference of opinion as to the best approach for surgical repair of such hernias it is believed that the thoracic approach for traumatic diaphragmatic hernia is far superior to the abdominal approach. With the thoracic approach one possesses the advantage of very adequate exposure, clear visability of all the structures, the section of any adhesions to the lung and mediastinum, ability to reinflate the lung under direct vision and a very adequate approach to the diaphragmatic defect. In the matter of repair simple mattress sutures in this case were quite adequate and reinforcement with imbricating stitches was possible. Other techniques of closure such as the use of fascia lata for approximating large defects can be used.

Inflation of the lung under direct vision at the operating table is of extreme importance so as to overcome atelectasis. Careful attention to maintaining adequate aeration of the lungs is of utmost importance in prevention of pulmonary complications. Early ambulation and underwater catheter, water seal drainage from the chest aid greatly. The principle of complete and immediate re-expansion of the lung will avoid the dread complications of atelectasis, pneumonitis and empyema. It is, we believe, failure to respect this point which makes for trouble and perhaps has discouraged surgeons from using the thoracic approach more frequently.

As this case demonstrates in conditions of persistent vague symptomatology which is associated with either the gastro-intestinal tract, cardio-vascular or pulmonary system, one must suspect diaphragmatic pathology. Too often, vague symptoms may be dismissed without an adequate work up which must include chest x-rays, and gastro-intestinal x-rays. In the advanced cases, physical diagnosis will reveal the trouble, but in small diaphragmatic defects abdominal contents may intermittently slip in and out of the chest and so make the diagnosis more obscure. Careful x-rays, perhaps with the patient postured in Trendelenburg position, will reveal the source of the patient's vague distress.

SUMMARY

A case of traumatic diaphragmatic hernia with delayed symptoms is presented. The symptom complex is evaluated and correlated to the pathologic findings. Successful operative repair relieved all symptoms.

104 So. Michigan Ave.

We wish to acknowledge assistance from Drs. J. J. Horwitz and S. F. Strauss.

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ACCIDENTS

The combined energies of the American Academy of Pediatrics, the National Safety Council, the Children's Bureau, and the Metropolitan Life Insurance Company are being directed toward curtailment of accidents, now the leading cause of death in childhood. According to the statistics of the Metropolitan Life Insurance Company, accidents now outrank every other cause, at ages one to four, and the reduction in mortality in the past fifteen years has been relatively small. A campaign of safety education directed largely to adults should help to prevent these burns, poisonings, falls, motor vehicle accidents and drownings in early childhood. *Excerpt: Recent Advances in Pediatrics, May B. Guy, M.D., J.A.M.W.A., Nov. 1950.*

NEWS OF THE STATE



CHAMPAIGN

Fifty Year Members.—Drs. George R. Blackstone, Urbana, and Parley C. Casto, St. Joseph, were presented with the insignia of the Fifty Year Club of the Illinois State Medical Society at the November meeting of the Champaign County Medical Society. The presenation was made by Dr. Harlan English, Danville, Councilor of the District.

CLARK

Physician Honored on Birthday.—Dr. Dellie L. Wilhoit, Martinsville, was given a surprise birthday party by the members of the community, November 24. Dr. Wilhoit, sixty-eight years of age, taught school before he entered medical practice.

COOK

Society News.—On October 26, Dr. Herman L. Kretschmer delivered the William T. Belfield Memorial Lecture at the Chicago Urological Society meeting. His subject was entitled "The History of the Development of Urology in Chicago and the Middle West." Dr. Kretschmer delivered the Fourth Peter T. Bohan Lecture, November 10, before the University of Kansas School of Medicine, on "The Relationships Between Urology and Internal Medicine."—Dr. Leon Unger addressed the regional meeting of the American College of Physicians, November 18, in Wisconsin, on "Migraine."—The Chicago Medical Society was addressed December 13 by Dr. Perrin H. Long, Baltimore, on "The Current Clinical Usage of Antibiotics" and Commander T. J. Canty, MD. U.S.N., officer in charge of the amputation program and director of naval prosthetic research, U. S. Naval Hospital, Oakland, Calif., on "Amputation Surgery and Recent Developments in Artificial Limbs."—Arthur Steinhaus, Ph.D., professor of physiology, George Williams College, addressed the Chicago Society of Physical Medicine and Rehabilitation, January 24, on "Physiology of Exercise."

Branch Meetings.—"The Therapy of Hypertension" was discussed by Dr. Oscar Sugar, Chicago, before the North Shore Branch of the Chicago Medical Society, December 5. .Other participants were Dr. Eugene Ferris, Cincinnati, internist, and Dr. Geza de Takats, Chicago.—At a meeting of the Northwest Branch of the Chicago Medical Society, December 1, Dr. Eugene T. McEnery, Chicago, presented "Pulmonary Tuberculosis in Children."

Personal.—Dr. Walter G. Maddock, the Elcock professsor of surgery, Northwestern University Medical School, has been unanimously elected to the chairmanship of the medical and scientific committee of the Illinois Division, American Cancer Society, Inc., for the year 1950-1951, it was announced recently by Edward Foss Wilson, president of the society. The medical and scientific committee, composed of fifty-two Illinois physicians and scientists, is responsible for the division's medical and scientific policy, including research, education and service. It reviews all professional activities and projects and recommends appropriations to the executive committee of the society.—Dr. Walton Van Winkle, Jr., formerly medical official with the U.S. Food and Drug Administration, and recently secretary, Therapeutics Trials Committee of the American Medical Association, has been appointed director of research for Ethicon Suture Laboratories Inc., succeeding Dr. H. L. Davis. The appointment was effective January 1.

Dr. Percy Honored.—Dr. Nelson M. Percy, surgeon in chief at Augustana Hospital, was honored by members of the staff of the hospital and their wives, November 7, marking the completion of fifty years in the practice of medicine.

Physician Given War Medal.—Major Wade F. Heritage, Chicago, was recently awarded the Bronze Star for gallantry in action with the 24th Infantry Division in Korea.

Award to Dr. Wolfer.—The second annual award for outstanding service in cancer control, presented by the Illinois Division of the American Cancer Society, was awarded to Dr. John A. Wolfer, October 6. Dr. Wolfer is professor emeritus of surgery and director of the tumor clinic at Northwestern University Medical School. In a citation which accompanied the engraved medallion, Dr. Wolfer was cited as one of the pioneers in the development of the activities of the American Cancer society.

Chairman Named for Special Committee.—Dr. Warren H. Cole has been appointed by Dean Stanley W. Olson as chairman of a committee which will select a new head for the department of medicine at the University of Illinois College of Medicine and the University's Research and Educational Hospitals.

Appointed to the committee with Dr. Cole are Dr. Granville A. Bennett, Dr. George M. Hass, Dr. Francis J. Gerty, Dr. Henry G. Poncher, Dr. F. E. Senear, and Dr. George E. Wakerlin.

Dr. Robert W. Keeton, present head of the department of Medicine, will reach the compulsory retirement age of 68 during the present academic year.

Winter Lecture Series at Chicago.—New and important advances in the fight against death and disease will be reported by physicians and surgeons of the University of Chicago's medical and biological research center in a University College winter lecture series. Dr. William J. Dieckmann, chairman of the university's department of obstetrics and gynecology and chief-of-staff of Chicago Lying-in Hospital and Dispensary, will open the series with a discussion on "Safe Childbirth." He will speak at 5:30 p.m., Tuesday, January 9, at the university's loop center, 19 South LaSalle. Chief of the university's surgery department, Dr. Lester R. Dragstedt, will present recent progress in the treatment of peptic ulcers at the January 23 lecture. Dr. Dragstedt, whose vagatomy operation for gastroduodenal ulcers, discovery of lipocaic, and studies on the function of pancreas are milestones in surgery, was awarded the 1950 gold medal of the American Medical Association for original investigation.

Other lectures and the topics of the lectures for the series are: Dr. Thomas W. Lester, Jr., assistant professor of medicine, "Controlling Airborne Infections," January 16; Dr. Dwight E. Clark, associate professor of surgery and secretary of the department, "Radioactive Iodine: New Treatment for Thyroid Diseases," January 30; Dr. M. Edward Davis, professor of obstetrics and gynecology, 'Diagnosis and Treatment of Gynecologic Cancer, Sterility and Menopause," February 6; and Dr. Leon O. Jacobson, associate professor of medicine, "The Fight Against Cancer," February 13.

Faculty Appointments at Chicago Medical School.—The following appointments were recently made at the Chicago Medical School: Dr. Harry H. Fineberg, associate in psychiatry; Dr. Bernard M. Chapman, associate in surgery; Dr. Paul Hurwitz, assistant professor of ophthalmology; and Drs. David Holden and Bina Rosenberg, instructors in ophthalmology.

New Dermatology Department Head at Northwestern.—Dr. Herbert Rattner, professor of dermatology in the Northwestern University Medical School, has been appointed chairman of the Department of Dermatology, President J. Roscoe Miller announced December 7.

The chairmanship was formerly held by Dr. Edward Oliver, who is now professor emeritus of dermatology. Dr. Oliver, who joined the Medical School faculty in 1940, had served as department chairman since that time.

Dr. Rattner, graduate of the Northwestern Medical School in 1926, served as a staff dermatologist in the Cook County, Michael Reese, Augustana, and South Shore hospitals before joining the Medical School faculty in 1940.

He was a volunteer consulting dermatologist for the army and a member of the Food Administration Planning Board during World War II. He is author of a number of articles on dermatology and syphilology.

Fred L. Adair Foundation Formed.—The establishment of the Fred L. Adair Foundation of the American Committee on Maternal Welfare, Inc., was announced November 8 at a dinner given for Dr. Fred L. Adair, a leader in obstetrics in Chicago for the past 20 years, at the Quadrangle Club of the University of Chicago. In addition to being a tribute to Dr. Adair, the occasion was also a going-away party, as Dr. and Mrs. Adair are leaving Chicago to make their home in Florida. Dr. Adair has made a lasting contribution to the improvement in the care of the mothers and babies of the world. He was Mary Campau Ryerson Professor and chairman of the department of obstetrics and gynecology of the University of Chicago and chief of service at Lying-In Hospital for 13 years. He was chairman of the Joint Maternal and Welfare Committee from its founding, in 1937, until 1948, when he became its honorary chairman. He has also been president of the American Committee on Maternal Welfare, Inc., since its incorporation in 1934 ofter 15 years of

operation as an unincorporated committee with Dr. Adair as its chairman. It is ths last group which is the parent organization of the Fred Lyman Adair Foundation. This foundation is a fund-raising subsidiary formed to facilitate the collection of donations for research and education in better care for all women, particularly in reference to their reproductive functions, and infants before and after birth. The American Committee on Maternal Welfare, Inc., is a national organization which includes medical groups and public health and nursing organizations. Its members are representatives of 26 separate societies, for which it acts as a clearinghouse or coordinating agency. Its offices are at 116 South Michigan Avenue.

Changes in Faculty at Illinois.—Appointment of four to the clinical faculty of the University of Illinois College of Medicine with professorial rank has been announced by Dean Stanley W. Olson.

Dr. Joseph P. Weinmann has been appointed professor of oral pathology. He has been a staff member of the College of Dentistry since 1946, holding the rank of professor of pathology. Dr. Weinmann is the author of more than 80 scientific articles on histology, pathology, and physiology of the oral cavity. Dr. Weinmann is a medical graduate of the University of Vienna.

Mr. Oren C. Durham has been named lecturer in allergy with the rank of assistant professor. He has held the position of chief botanist at Abbott Laboratories since 1925. His primary interests have concerned field and atmospheric research on pollens and fungus spores.

Dr. Daniel J. Pachman has been appointed as clinical assistant professor of pediatrics. A medical graduate of Duke University, Dr. Pachman has taught at Duke, the University of Chicago, and at Northwestern University.

Dr. Edward Press has been appointed as assistant professor of preventive medicine. He presently holds a full-time appointment as associate director of the University of Illinois Division of Services for Crippled Children. He received the doctor of medicine degree from New York University and the master of public health degree from Harvard, and is the author of many scientific articles on public health and pediatrics.

Promotion of five members of the clinical faculty of the University of Illinois College of Medicine from the rank of assistant professor to associate professor has been announced by Dean Stanley W. Olson. Eleven others have been promoted from associate to assistant professor, and 12 from instructor to assistant professor.

Promoted from clinical assistant professor to clinical associate professor are the following:

Medicine—Drs. Stuyvesant Butler and Alva A. Knight.

Orthopaedic Surgery—Dr. F. G. Murphy.

Surgery—Dr. Stanley E. Lawton.

Promoted from assistant professor to associate professor:

Public Health—Dr. E. A. Piszczek.

Promoted from clinical associate to clinical assistant professor are the following:

Medicine—Drs. Herbert C. Breuhaus, I. I. Ritter, A. H. Rosenblum, and G. C. Turner.

Orthopaedic Surgery—Drs. William A. Marshall, Leo F. Miller, Fred Shapiro, and Horace E. Turner.

Pathology—Drs. Aaron Learner, C. C. Mason, and C. L. Pirani.

Promoted from clinical instructor to clinical assistant professor are the following:

Medicine—Dr. Willard G. DeYoung.

Ophthalmology—Drs. H. Isabelle McGarry and Edward A. Pushkin.

Orthopaedic Surgery—Dr. J. D. Farrington.

Pediatrics—Dr. Anne Bohning.

Psychiatry—Drs. Marjorie C. Meehan and Erich Paschkes.

Radiology—Dr. John W. Clark.

Surgery—Drs. C. David Brown, W. G. Diffenbaugh, and Harold A. Roth.

Promoted from instructor to assistant professor:

Public Health—Dr. Kenneth Morse.

Two members of the Department of Surgery at the University of Illinois College of Medicine, Dr. Vernon C. David and Dr. R. J. E. Oden, have been given emeritus status by the UI Board of Trustees upon reaching their 68th birthdays.

Dr. David has held the rank of Rush Clinical professor of surgery in the College of Medicine since 1941. He previously served on the faculty of Rush Medical School since 1910 when he was appointed an assistant in surgery. He was promoted to clinical professor in surgery and chairman of the department in 1949. He is a graduate of Rush, class of 1907.

Dr. David was presented with honorary doctor of science degrees by Northwestern University and the University of Michigan in 1948 and 1950, respectively. He has served as president of the American Surgical Association, Chicago Surgical Society, Western Surgical Association, and the American Board of Surgery, and was vice-president of the American College of Surgeons.

Dr. Oden, clinical associate professor of surgery, has been a member of the UI faculty since 1925, when he began teaching anatomy. He graduated from University Medical College at Kansas City, Mo., in 1906.

Since 1919, Dr. Oden has been an attending surgeon on the staff of Augustana Hospital.

Staff Promotions at Northwestern.—Promotions for eight staff members of the Northwestern University Medical School were announced December 8 by Dr. Richard H. Young, dean.

The promotions included three to full professorships: Dr. Thomas Cyrus Galloway to professor of otolaryngology. Dr. Harold Augusta Sofield to professor of bone and joint surgery and Dr. Joseph

A. Wells to professor of pharmacology. In addition to being members of the Northwestern medical staff, Dr Sofield is head of the Shriners Hospital for Crippled Children, and Dr. Galloway is on the staff of the Evanston Hospital.

The other five promotions were for Dr. Louis B. Newman to associate professor of physical medicine, Dr. Louis W. Sauer to associate professor of pediatrics, Dr. Eugene S. Talbot, Jr., to associate professor of medicine, Dr. John E. Kearns, Jr., to assistant professor of surgery and Dr. Theron Randolph to associate in medicine.

Scholarships Awarded.—Four students who have attained high scholastic standing have been awarded Rea Scholarships by the University of Illinois College of Medicine. Recipients of the scholarships are Morton S. Comess, Robert E. Lee, Bert G. Leigh, and Harold A. Shafter.

The scholarships carry a stipend of $250 each. Their purpose is "to help pay the tuition fees of needy students." Scholastic standing, character, and financial need are considered in making the awards.

Shafter, Comess, and Lee currently rank highest scholastically in the second, third and fourth-year classes, respectively, of the College of Medicine. Leigh holds high scholastic rank in the Fourth-year class.

The scholarships are the result of a bequest from Prof. Robert Laughlin Rea, who willed $5,000 to the College of Physicians and Surgeons in 1899. The fund was transferred to the University of Illinois when it took over the facilities and records of the College of Physicians and Surgeons in 1913. Ruth B. Geyer and Rudolph E. Wilhelm, fourth-year students at the University of Illinois, have been awarded Yarros scholarships for 1950-51, Dean Stanley W. Olson has announced.

The scholarships carry a stipend of $150 each. Needy and deserving students in the College of Medicine are eligible for the scholarships.

The scholarship fund was established at the University of Illinois is honor of the late Dr. Rachelle S. Yarros by her husband, Mr. Victor S. Yarros of LaJolla, Cal. Prof. Yarros taught obstetircs and social hygiene at the College of Medicine prior to her retirement in 1938. Allen H. Lefstin, a third-year student at the University of Illinois, has been awarded the Ralph C. Berkelhamer scholarship for 1950-51.

Lefstin holds high scholastic rank in the College of Medicine and has been elected to Alpha Omega Alpha, international honorary medical fraternity.

The scholarship, carrying a stipend of $100, was established four years ago by the Berkelhamer family of Chicago, in honor of the late Dr. Ralph C. Berkelhamer, who died while serving as a medical officer on Bataan. Students who have completed at least one year in the College of Medicine are eligible for the scholarship. The Berkelhamer family has stipulated that the scholarship may be awarded "to any needy and deserving student, with no prejudice as to race or religion."

Creation of Human Energy to be Studied Through Grant to Northwestern.—Northwestern University has received a grant of $4,500 from the Rockefeller Foundation, New York, for study of the creation of energy in the human body, it was announced recently. Dr. I. M. Klotz, Northwestern professor of chemistry and biology, will direct the research.

University scientists will investigate the processes by which chemical fluids in the human body combine with food particles to produce energy.

Dr. Klotz, member of the Northwestern faculty since 1942, has conducted extensive studies on the effect of drugs on the energy-creating process. He received the Army-Navy Certificate of Appreciation for research during World War II, and in 1949 was presented the American Chemical Society's Eli Lilly Award in Biochemistry.

New Program for Nurses Offered by Northwestern.—Northwestern University's Medical School recently announced a new program for nurses which offers a bachelor of science degree in nursing in addition to the diploma in nursing.

Dr. Theodore R. Van Dellen, assistant dean of the Medical School, emphasized that there has been a definite need for such a program. "This course of training will make it less difficult for women students in nursing to obtain a bachelor of science degree," he said. 'The plan will provide better education for surses and at the same time will speed up the course of training."

Candidates for the new degree must have 90 quarter hours in an accredited university and must complete three calendar years in one of the Schools of Nursing affiliated with Northwestern University. These are Wesley Memorial Hospital and Passavant Memorial Hospital, both located on the Chicago Campus, and Evanston Hospital, Evanston, Ill.

Under the new program residence in Northwestern's College of Liberal Arts is not required. Credit from any accredited university will be accepted but work in English, chemistry, and biology is required.

In addition, Northwestern offers two other nursing programs. In one, students may obtain the diploma of a graduate nurse by spending three years in one of the three hospitals affiliated with Northwestern. The second program, leading to a bachelor of science degree and a nursing diploma, requires that students have two years of liberal arts credits before entering the School of Nursing. Under this plan, students must spend one of the two years in Northwestern's College of Liberal Ars.

The new program, formulated by the Council on Nursing Education, was requested by the Northwestern Senate last June. Dr. John H. Annegers, assistant professor of physiology, is the coordinator and director of the program in nursing, under Dr. Van Dellen, director of the newly created Division of Auxiliary Medical Services.

Council members who planned the program include Dr. Richard H. Young, Medical School dean;

Dr. Van Dellen, Dr. Annegers, Dr. E. T. McSwain, dean of Northwestern's University College; and Directors of Nursing Miss Edna S. Neuman, Wesley Memorial Hospital; Miss Elizabeth Odell, Evanston Hospital, and Miss Mariam Rand, Passavant Memorial Hospital.

LAKE

Dr. Petter Receives Jaycee Award.—Dr. Charles K. Petter, Waukegan, medical director of the Lake County Tuberculosis Sanatorium, and secretary of the Illinois Tuberculosis Association, was named "Man of the Month" by the Waukegan-North Chicago Junior Chamber of Commerce, in September. Selection of Dr. Petter for the September "Man of the Month" was made on the basis of his "outstanding work at the sanatorium and his untiring efforts in safeguarding the health of the public," Brad West, certificate committee chairman announced. The certificate was awarded to Dr. Petter at the Jaycee dinner in December.

The tuberculosis death rate has declined from 38 per 100,000 in 1938 when Dr. Petter went to Waukegan to look over the TB program to 13 per 100,000 at present, West said. During Dr. Petter's twelve years as head of the county tuberculosis program the incidence of infection to school children has dropped from 25 per cent to 8 per cent. Also cited in the award was Dr. Petter's work in patient education at the sanatorium. Since its inception in 1943, three patients have received high school diplomas, three have received grade school diplomas, and several are taking college correspondence courses.

LA SALLE

Fifty Year Member.—Dr. Harry S. Lester, Streator, was presented with in insignia of the Fifty Year Club of the Illinois State Medical Society at a meeting of the La Salle County Medical Society, November 11. The presentation was made by Dr. Joseph O'Neill, Ottawa. Dr. Paul M. Fox, Chicago, was the principal speaker.

MACON

Society News.—Dr. Hampar Kelikian, Chicago, discussed "Stasis Problems of Lower Extremities" before the Macon County Medical Society, November 28.

MADISON

General Practice Chapter Established.—The Helvetia Chapter of the American Academy of General Practice was created at a meeting, November 15, in Highland. Officers are Dr. R. L. Holcombe, Highland, president; Dr. C. E. Molden, Troy, vice president; and Dr. Cecilia Hellrung, Edwardsville, secretary-treasurer.

PIATT

Ninety-Two Years of Age.—Dr Warren E. Burgett, Bement, observed his ninety-second birthday in November. Dr. Burgett, who was born in Woodside, has been practicing medicine for more than sixty-two years. He has been a member of the Fifty Year Club since 1944.

SANGAMON

Society News.—Dr. Eric Oldberg, Chicago, gave a discussion on "The Spinal Cord" before the Sangamon County Medical Society, in Springfield, December 7.

Personal.—At a recent meeting of the Council of the Illinois State Medical Society, Dr. Harrison C. Blankmeyer, Springfield, was voted to emeritus membership.

SCOTT

Society Election.—The Scott County Medical Society elected the following officers for 1951: president, Dr. Paul White; president-elect, Dr Preston E. Gibson; vice president, Dr. Walter Balzer; secretary, Dr. Harry B. Weinberg; treasurer, Dr. F. Dale Wilson; historian, Dr. William S. Binford; representatives to the executive committee: Drs. M. J. Brown, R. A. Berger, T. W. McMeans, W. E. Foley and James Bishop.

WILL—GRUNDY

Society Election.—Dr. Emil Viskocil, Lockport, was chosen president of the Will Grundy County Medical Society recently, to succeed Dr. Theodore Z. Polley, Joliet. Other officers are Dr. George McCabe, Morris, vice president; Dr. H. Wehrspann, secretary-treasurer; Dr. Richard Calosio, sergeant-at-arms; Dr. Joseph L. Trizna, vice president-elect; and Dr. Robert Stephen as secretary-elect, meaning they will take these posts next year. Drs. Wehrspann, Calosio, Trizna and Stephens are all of Joliet. Selected as delegates to the Illinois State Medical Society were Dr. Bernard Klein and Veheh M. Seron with Dr. Robert Lennon and Dr. Calosio as alternates. On the board of censors are Dr. Charles Willson, Wilmington; Dr. L. J. Wilhelmi and Dr. Arthur H. Fahrner. Drs. Klein, Seron, Lennon, Wilhelmi and Fahrner are also of Joliet.

WILLIAMSON

Personal.—Dr. A. W. Miller has assumed duties as superintendent of Herrin Hospital, Herrin, succeeding Dr. D. E. Robinson, who resigned to take on special work in radiology in Kansas City, Mo.

HEALTH DEPARTMENT ACTIVITIES

Health Report Available.—The thirty-second annual report of the Illinois Department of Public Health, covering the year ended June 30, 1949, has recently been made available. The report reviews the activities of the various divisions of the department.

Low Maternal Death Rate.—Maternal deaths reached a new low in Illinois during the first five months of 1950, the bureau of statistics of the state Department of Public Health has announced.

Up to June 1 only 36 deaths of mothers in childbirth occurred as against 60 for the corresponding period of 1949. This gives the state a rate of five maternal deaths for every 10,000 live births.

During the same 1950 period a national rate of maternal mortality was seven per 10,000 live births according to reports from the national office of vital statistics.

Statisticians pointed out that the present day maternal death record borders on the "remarkable" in view of the fact that a few years ago there was widespread belief that maternal mortality would never fall below 10 per 10,000 live births.

This favorable experience in Illinois, the health department reports, is evidence of very high standards of maternal care and obstetrical practice being maintained throughout the state. The decline is also a credit to mothers who have had the wisdom to make use of such modern medical safeguards as good prenatal care and medical attendance in childbirth.

GENERAL

Malcolm MacEachern Honored.—Officers, regents, and past and present members of the administrative staff of the American College of Surgeons held a dinner at the Drake Hotel, Chicago, November 19, in honor of Dr. Malcolm T. MacEachern, Director Emeritus of the College, upon the occasion of his retirement.

Dr. MacEachern began his service with the American College of Surgeons in August, 1923, as Director of Hospital Activities. From 1935 to 1949 he was Associate Director and Chairman of the Administrative Board. In 1949 he was appointed Director. In March, 1950, he assumed his present title of Director Emeritus when he was succeeded as Director by Dr. Paul R. Hawley, but he remained in charge of the hopsital activities of the College until the end of October.

Dr. MacEachern will continue his duties as Professor and Director of Northwestern University's Program in Hospital Administration which he established in 1943. He also continues as Chairman of the Tri-State Hospital Assembly whose 1951 annual meeting will be held in Chicago April 30, May 1 and 2, and as Director of the Chicago Institute for Hospital Administrators sponsored by the American College of Hospital Administrators which will be held next September.

Eli Lilly Entertains Medical Students.—Students and members of the faculty of Northwestern University Medical School were guests of Eli Lilly and Company, November 19-21. The program included a tour of the company, a tour to Indianapolis, special dinners and lectures.

Officers of District Medical Association.—Dr. Benjamin Markowitz, Bloomington, was elected president of the Northern Illinois Medical Association at a meeting in Peoria, November 2. Other officers are Dr. David Murphy, Dixon, and Dr. Raymond E. Davies, Spring Valley, vice presidents; and Dr. George A. Discus, Streator, secretary-treasurer. The reelection of Dr. Discus marked his fifty-first consecutive term.

Joint Meeting of Pathologists.—At a joint meeting of the North Cenral Region College of American Pahologists and the Illinois Society of Pathologists in Chicago, December 2, the following speakers, among others, participated: Dr. Clarence Cohn, "Clinical Theory of Flame Photometry"; Dr. Rachmiel Levine, "Physiologic Basis for the Therapeutic Use of Cortisone and ACTH"; Dr. Henry Guterman, "The Measurement of Urinary Steroid Hormones: Principles and Applications"; Dr. Karl Singer, "The Pathogenesis of Sickle Cell Disease"; Dr. Edwin Hirsch and Dr. William B. Wartman acted as moderators in a seminar on a group of selected cases.

Special Training Course.—A special four-week training course for employment and placement counselors working with cerebral palsied and other severely handicapped workers will be held March 12 through April 6 in New York, according to Lawrence J. Linck, executive director of the National Society for Crippled Children and Adults.

The program — which is the fourth to be offered under the joint sponsorship of the Alpha Gamma Delta International Women's Fraternity and the National Society — will be given at the Institute of Rehabilitation and Physical Medicine of the New York University-Bellevue Medical Center under the auspices of the school of education of New York University.

Designed to help meet the employment problems of handicapped workers, the program will be under the guidance of staff members of the Institute, the university's school of education and other specialists in this work. Upon satisfactory completion of the course, six hours of graduate credit in education will be granted by the university.

Training will include case studies and evaluations, clinical study and observation, lectures by outstanding authorities on medical and psycho-social aspects of the problem, counseling tools and techniques, placement tools and techniques, and vocational training. Counselors will also have an opportunity to visit rehabilitation and treatment centers to obtain first-hand knowledge of the problems involved.

Persons wishing to receive a fellowship must make formal application by Jan. 26, 1951. Applications and further information may be obtained from the National Personnel Registry and Employment Service of the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3, Ill.

DEATHS

Brig. Gen. Benedict Aron, Chicago, who graduated at Chicago College of Medicine and Surgery in 1916, died December 7, aged 63. He was former surgeon-general of th Illinois Reserve Militia.

Joseph D. Cain, retired, formerly of Chicago, who graduated at Central College of Physicians and Surgeons, Indianapolis, in 1897, died recently in his home at Whitehall, Michigan.

Carl B. Davis, Winnetka, who graduated at Rush Medical College in 1903, died December 11, aged 73. He was formerly professor of surgery at the University of Illinois College of Medicine.

John A. Graham, Chicago, who graduated at Rush Medical College in 1902, died November 19, aged 70.

He was chief surgeon emeritus and member emeritus of the board of trustees of Henrotin Hospital.

Noel E. Gordon, Minonk, who graduated at the University of Illinois College of Medicine in 1930, died November 2, aged 47. He had been in ill health for several years.

Fred W. Jones, Alton, who graduated at the University of Illinois College of Medicine in 1905, died at Tavernier, Fla., November 15, aged 70. He had practiced medicine in Alton for many years.

Charles W. Lamb, Forest Park, who graduated at Jenner Medical College in 1910, died September 11, aged 71, of carcinoma of the tongue.

James H. McClure, Chicago, who graduated at Meharry Medical College, Nashville, in 1916, died October 31, aged 67.

Henry S. Sherman, Chicago, who graduated at Rush Medical College in 1917, died October 27, aged 60. He had practiced medicine in Chicago for 30 years, was attending physician at Mt. Sinai Hospital and on the staff of Chicago Medical School.

Raymond E. Ussery, Ava, who graduated at Kentucky University Medical Department, Louisville, in 1903, died November 27, aged 81.

Henry Abraham Utter, Harrisburg, who graduated at the University of Arkansas School of Medicine, Little Rock, in 1936, died August 19, aged 40.

Roger T. Vaughan, Chicago, who graduated at Rush Medical College in 1903, died November 12, aged 72. He had been night supervisor of Cook County Hospital for 37 years.

Stanley R. Walker, Chebanse, who graduated at Queen's University Faculty of Medicine, Kingston, Ontario, in 1889, died December 1, aged 87. He had been mayor of Chebanse for 30 years.

Robert Young, Hoopeston, who graduated at Columbia University College of Physicians and Surgeons, New York, in 1949, died September 25, aged 25, of coronary occlusion.

"FOR THE COMMON GOOD"

Woman's Auxiliaries Observe Health Talk on TV.—December 13 marked the second year of Health Talk on WGN-TV. The telecast, produced by the Educational Committee of the Illinois State Medical Society, was open to a studio audience which included numerous members of the Radiological Society of North America who were in annual session at the Palmer House. "If the Bomb Strikes" was the title of the program which featured, A. C. Ivy, Vice President in Charge of the Chicago Professional Colleges of the University of Illinois; Roger Harvey, professor and head of the department of radiology, at Illinois; William G. Faraghan, Atomic Energy Commission Fellow at Illinois, and Theodore R. Van Dellen.

Brig. General James P. Cooney, Washington, D. C., made a guest appearance on the telecast. Asked for his thoughts on the possibility of a bomb being dropped, he said that the chances were remote, but that it was better to hope for the best and prepare for the worst.

The Woman's Auxiliary to the Chicago Medical Society presented a birthday cake to observe the anniversary of Health Talk. Presentation was made by Mrs. Morris Friedell, and Mrs. M. F. Stein, public relations officer and president, respectively. Dr. Ford K. Hick, Co-Chairman of the Educational Committee accepted for the committee, and Dr. Van Dellen for WGN-TV.

A congratulatory telegram was also sent to the Committee by the Woman's Auxiliary to the Illinois State Medical Society.

The medical profession of Illinois will be interested to know that Jack Mabley of the Chicago Daily News again mentioned Health Talk as among the recommended programs on television, as did the Annual School Broadcasting Conference which met in Chicago, December 12-15. Other telecasts presented since the last issue of the Illinois Medical Journal were:

Building a New Life (repeat), Louis B. Newman and two veterans from Hines Veterans Administration Hospital.

Your Nails in Health and Disease, Cleveland J. White, November 29.

The Common Cold (repeat), Clayton Loosli, December 6.

Your Doctor Speaks over WFJL, Thursday evenings, at 7:30 carried the following transcribed broadcasts under the auspices of the Educational Committee:

Clarence A. Newmann, November 30, Growing Old Gracefully.

J. J. Callahan, December 7, Fractures.

Albert Van Der Kloot, December 14, Diabetes Mellitus in Children.

Warren H. Cole, December 21, Appendicitis.

"You and Your Baby" over Station WAAF, Tuesday mornings at 10:30 a.m., presented the following physicians in live broadcasts under the auspices of the Educational Committee:

Alva Newcomb, November 21, A Baby Boy is Born.

John M. Reichert, November 28, Taking the Baby Home.

Eugene T. McEnery, December 5, Breast Feeding.

Eva J. Line, December 12, The Bottle Fed Baby.

"Here is Your Doctor" over Station WCFL, Saturday mornings at 11 a.m., presented the following physicians in transcribed broadcasts under the auspices of the Educational Committee:

Edwin A. Balcer, November 25, Postoperative Care.

Harry H. Boyle, December 9, Immunization Procedures in Childhood.

Percy E. Hopkins, December 16, Appendicitis.

Noah D. Fabricant, December 23, The Common Cold.

Lectures Arranged Through the Educational Committee:

Career Conference, December 27-29, at the Illinois Institute of Technology, under the sponsorship of the Chicago Sun-Times and the Chicago Technical Societies Council:

Francis Manlove, assistant secretary, Council on Medical Education and Hospitals, AMA.

Richard Young, dean, Northwestern University Medical School.

John J. Sheinin, dean, Chicago Medical School.

F. J. Mullin, Ph.D., dean of students, Division of Biological Sciences, University of Chicago.

Stanley Olson, dean, University of Illinois College of Medicine.

Y. T. Oester, head of the department of pharmacology, Stritch School of Medicine of Loyola University.

John A. Mart, Pulaski PTA, January 3, in Chicago, What Causes Heart Disease.

Hugh A. Flack, Toman Library Forum, January 12, on Knowing Your Heart.

Herbert E. Schmitz, West Side Branch, Woman's Auxiliary, Chicago Medical Society, January 19, in River Forest, on Recent Advances in Cancer.

William M. Lees, Norwegian Women's Club, February 7, on Modern Trends in Cancer Research.

George E. Wakerlin, Young Married Couples Sunday Evening Club, February 11, on Animal Experimentation for Medical Advancement.

Eugene L. Slotkowski, Millard Avenue Junior Woman's Club, February 21, on Child Care.

George A. Hellmuth, Forest Ridge Women's Club, February 21, on Heart Disease.

Lectures Arranged by the Scientific Service Committee:

John J. Brosnan, Chicago, Effingham County Medical Society in Effingham, January 11, on Diagnosis and Treatment of Chest Diseases.

Jesse A. Stocker, Springfield, Macoupin-Montgomery County Medical Societies in Carlinville, January 23, on Recent Trends in the Surgery of Tuberculosis.

John B. O'Donoghue, Chicago, Macon County Medical Society in Decatur, January 23, on Acute Abdominal Emergencies.

Herbert E. Landes, Chicago, La Salle County Medical Society in La Salle, February 8, on Hematuria.

Frank B. Kelly and James A. Campbell, both of Chicago, Will-Grundy County Medical Society in Joliet, February 13, on Prognosis and Treatment of Sub-acute Bacterial Endocarditis and Indications, Technique and Interpretation of Cardiac Catheterization, respectively.

Even though control measures are only one factor in the eradication of tuberculosis, they may very well be the decisive factor. Anything which will reduce the size of the reservoir of the tubercle bacillus in human beings will lessen the number of new cases of tuberculosis. Every case of the disease, actually or potentially infectious, which is discovered and brought under control is a step in reducing the size of this reservoir. A. C. Christie, M.D., Pub. Health Reports, June 2, 1950.

As in the case of other highly infectious diseases, the spread of tuberculosis can only be controlled by the isolation of the patients with active, sputum-positive infection from those who are susceptible to the disease but who have not yet contracted it. This is not being done and cannot be done among the American Indians for whom hospital accommodations are not provided by the Bureau of Indian Affairs and for whom funds are not available to expand the contractual service with non-government-operated sanatoriums. Fred T. Foard, M.D., J.A.M.A., February 4, 1950.

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B_{12} is among the most potent of known microbiologically active substances.[3] Animal studies indicate that it increases the ability of the normal mammal to utilize protein.[4] With a high protein diet, 0.01 mcg. of vitamin B_{12} per day was found to increase significantly the growth rate of B_{12} deficient rats. In another study, growth response of B_{12} depleted rats was proportional to the B_{12} in the ration within the critical range of 0.025 to 0.1 mcg. per rat day.[5]

About 1 mcg. of vitamin B_{12} daily, administered intramuscularly, constitutes an effective dose in pernicious anemia. In a recent clinical study of young children manifesting vitamin B_{12} deficiency as evidenced by malnutrition and growth failure, oral administration of 10 mcg. of vitamin B_{12} daily for eight weeks induced marked responses in growth; notable increases in vigor, alertness and better general behavior; and improved appetite.[6]

Here again is further evidence of the broad, over-all nutrient contribution meat makes to the dietary. Eaten two or three times daily, it supplies not only generous amounts of high quality protein, but also significant quantities of vitamin B_{12} and other essential B complex vitamins, and of iron.

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Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

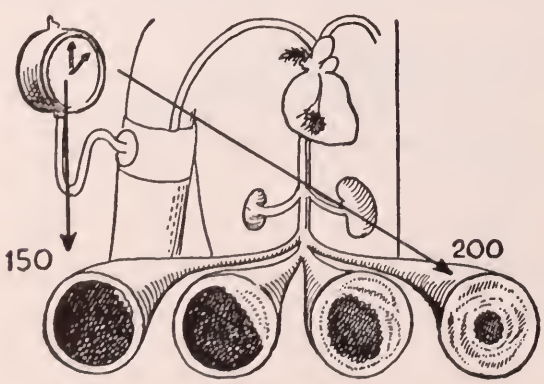
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages; diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

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For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

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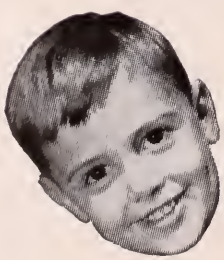
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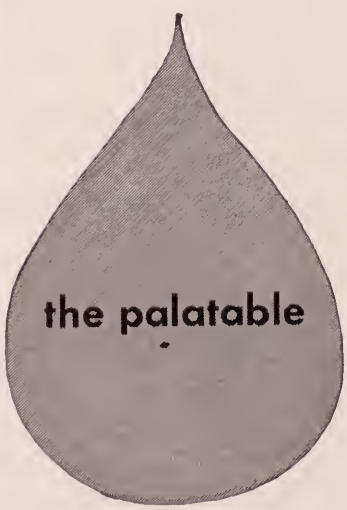
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PHYSICAL MEDICINE ABSTRACTS



A CONCEPT OF POLIOMYELITIS BASED ON OBSERVATIONS AND TREATMENT OF 6,000 CASES IN A FOUR-YEAR PERIOD (CONCLUDED)

Albert G. Bower, M.D., and Associates, Pasadena, Calif. In NORTHWEST MEDICINE, 49:4:261, April 1950.

No tracheotomy should be performed without definite criteria and indications that it will benefit the patient. Such criteria are (1) Inability to maintain a free airway by the usual means at our disposal. (2) Signs of developing anozia not otherwise correctible. (3) Paralysis of one or both vocal cords. (4) Pulmonary edema or atelectasis. (5) Rarely, in order to apply positive pressure to increase otherwise totally inadequate vital capacity as measured by the respiratory ventilation meter.

Patients with respiratory inadequacy, due to involvement of the muscles of respiration, the intercostals, the diaphragm or both, must go into the respirator.

Do not feed patients by mouth while acutely ill in the early stages of poliomyelitis. To do so is to invite disaster because of extreme gastrointestinal atony which precipitates vomiting and distention in the presence of food in the stomach.

Obviously, we have only started to study the metabolic changes in poliomyelitis patients and further biochemic studies are imperative but at least these initial observations point the way. Future studies will determine the optimal supportive measures needed by seriously ill patients and will save lives in types not now surviving. We feel that intravenous fluids should supply both food and hydration during the early acute phase and these should contain adequate potassium, provided the urinary output is adequate. Too much normal saline is to be avoided. Dietary protein replacement must be started as soon as permissible and early repeated intravenous irradiated plasma infusions have been life-saving in seriously ill patients. Just as postsurgical cases are studied carefully to determine immediate needs, so must the critically ill poliomyelitis patient be followed by the laboratory to determine how best to support him over critical phases of illness.

SUMMARY

(1) Etiology, epidemiology, symptomology, direct and differential diagnosis of poliomyelitis were outlined.

(2) Newer aspects were discussed, concerning metabolic changes occurring during the acute phase of severely ill poliomyelitis patients, as reflected in markedly altered biochemic conditions found present in their blood. These biochemic alterations, hitherto undescribed, were analyzed by means of serial determinations of serum proteins and of the electrolytes of the blood and

(Continued on page 62)

will reduction of serum cholesterol extend life?

by preventing atherosclerosis

"It is generally accepted that persistently high plasma cholesterol levels are associated with development of arteriosclerosis,"[1] a major cause of coronary thrombosis fatalities[2] and a "burning problem" in diabetes.[3]

Accumulating evidence shows that lipotropic therapy will reduce elevated blood cholesterol levels[4-7]. . . and even may "prevent or mitigate" cholesterol depositions in the intima of blood vessels in man and animals.

It has been reported[8] that in patients who have survived acute coronary occlusion, lipotropic therapy may significantly prolong life as compared to similar untreated groups.

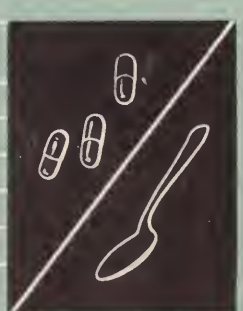
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"The average cholesterol content of the coronary arteries in a group of patients who died from acute coronary artery thrombosis was four times as great as the average cholesterol content of the coronary arteries in a comparable group of control patients."[2]

Write for samples and literature

1. J.A.M.A. 143:858, 1950.
2. Morrison, L. M. and Johnson, K. D.: Amer. Heart J. 39:31, 1950.
3. Joslin, E. P.: Rev. Gastroent. 17:545, 1950.
4. Herrmann, G. R.: Exp. Med. & Surg. 5:149, May-Aug. 1947.
5. Leinwand, I. and Moore, D. H.: Amer. Heart J. 38:3, Sept. 1949.
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7. Pomeranze, J. and Levine, V.: Rev. of Gastroent. 16:771, Oct. 1949.
8. Morrison, L. and Gonzalez, W. F.: Amer. Heart J. 38:471, Sept. 1949.

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calcium (di-calcium phosphate 750 mg.)	220 mg.
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phosphorus	200 mg.
magnesium	1.5 mg.
copper	1.5 mg.
cobalt	0.1 mg.
manganese	1.0 mg.
iodine	0.1 mg.
zinc	1.0 mg.

bibliography

1. Lancet 2:10, July 1942.
2. Ebbs, J. H.: Handbook of Nutrition, Chapt. XX, Chicago; Amer. Med. Assn. 1942.
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8. Biskind, M. S.: Vitamins and Hormones 4:147, 1946.

Samples and literature on request.

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Editorial, Brit. M. J. 2:962, 1947

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urine. They will be published in detail elsewhere.

(3) Where feasible, an attempt was made to correlate these biochemic changes with those of the clinical disease and to point out the usefulness of such determinations as a guide to therapy.

(4) Treatment was discussed from the conventional standpoint, as well as from the standpoint of utilizing newly obtained information and newly designed equipment. By virtue of increased knowledge of the pathologic physiology in poliomyelitis, it has been possible to improve existing equipment for mechanical respiration and more efficiently to combat abnormal biochemic changes occurring within the body of the patient as a result of the catabolic phase of injury due to the overwhelming action of the invading poliomyelitis virus.

(5) The need for additional studies to be merely beginners.

THE EFFECT OF MICROWAVES ON BONE AND BONE MARROW AND ON ADJACENT TISSUES

Joseph P. Engel, M.D., J. F. Herrick, Ph.D., Khalil G. Wakim, M.D., Ph.D., John H. Grindlay, M.D., and Frank H. Krusen, M.D., Rochester, Minn. In ARCHIVES OF PHYSICAL MEDICINE, 31: 7:453, July 1950.

Microwave diathermy was applied to the legs of anesthetized and trained dogs, and temperature measurements were taken before and after irradiation by means of thermistors and thermocouples placed into the adjacent soft tissues and into the bone cortex and bone marrow of the upper third of the tibia.

When submuscular bone was exposed to microwaves for a period of thirty minutes, the average increases of temperature were 4.3 degrees (C.) in the subcutaneous tissues, 4.6 degrees in the overlying tibialis anterior muscle, 3.8 degrees in the tibial cortex and 3.0 degrees in the tibial marrow. The average increase of rectal temperature was 0.3 degree.

When subcutaneous bone was exposed to microwaves for a thirty minute period, the average increases of temperature were 4.1 degree (C.) in the subcutaneous tissues, 5.0 degrees in the tibial cortex and 3.4 degrees in the tibial marrow, and 4.3 degrees in the adjacent gastrocnemius muscle. The average increase of rectal temperature was 0.2 degree.

Subcutaneously located bone was heated most effectively with microwaves when the rectangular director was placed parallel to the extremity.

Average rises of temperature of the leg tissues in trained dogs following exposure to microwaves were approximately 1 degree (C.) less than those obtained under similar procedures in anesthetized dogs.

When the lateral aspect of the leg was exposed to microwaves, higher temperatures were developed in the tibialis anterior, which overlies bone, than in the gastrocnemius, which does not overlie bone, provided the time of exposure did not exceed fifteen minutes.

An impedance-matching transformer placed in the field of microwave irradiation caused an increase in the tissue temperature of about 300 per cent over the values obtained when no transformer was used.

LATE SPONTANEOUS RUPTURE OF THE EXTENSOR

Edwin David Weinberg, M.D., Baltimore. In JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 142:13:979, April 1, 1950.

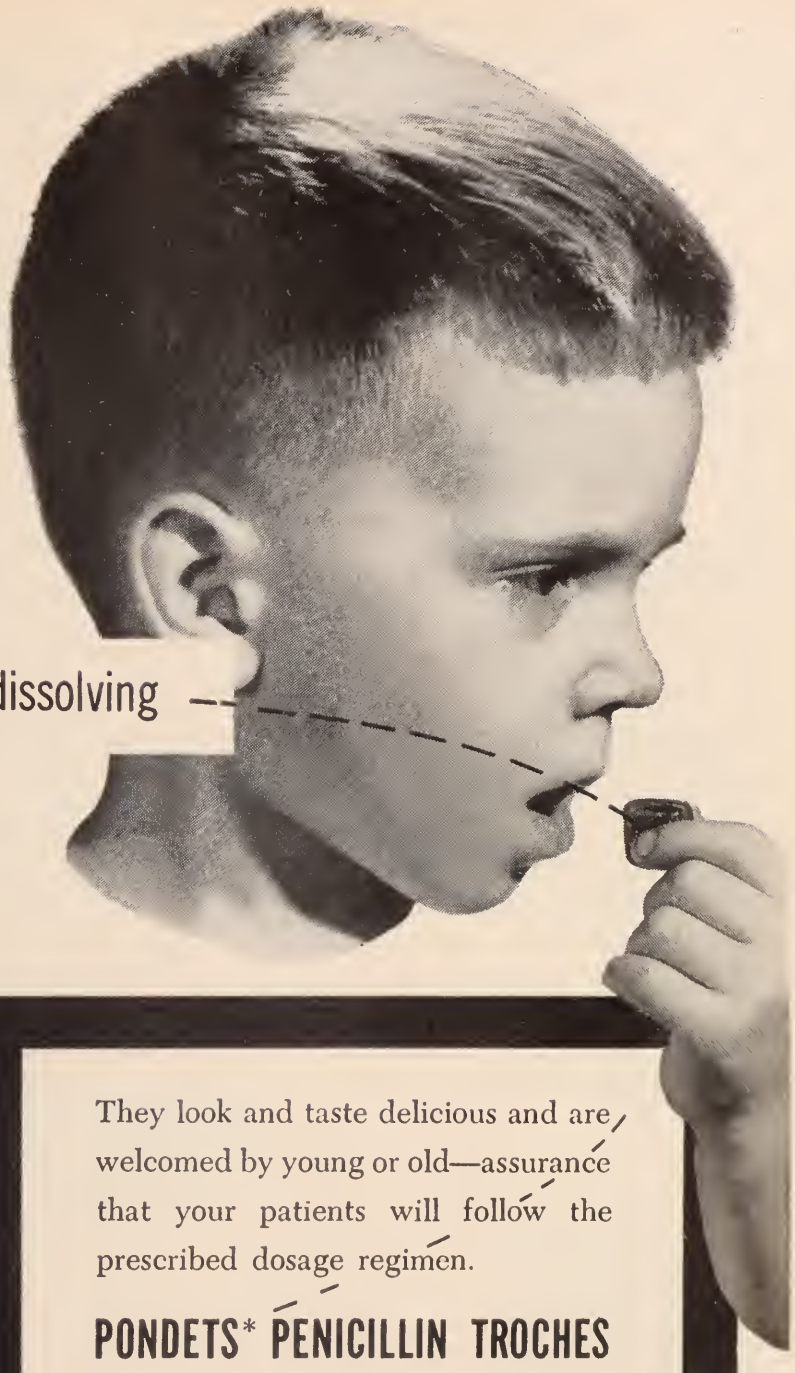
Subcutaneous rupture of a tendon at the wrist is uncommon. When the tendon is subjected to any great strain, either the periosteal insertion may give way and carry with it a fragment of bone or a rupture may occur at the musculotendinous junction. In order to rupture spontaneously the tendon must have been previously damaged by either trauma or disease. Late subcutaneous rupture of the extensor pollicis longus tendon following Colles' fracture is infrequent.

Treatment is surgical. Ideally, this consists of primary end to end suture. This may not be possible, however, because of the marked retraction of the divided tendon, the degree of adhesions or severe degenerative changes. When an end to end suture is not possible, various forms of tenoplasty have been used.

Postoperatively, a cast is applied, extending from below the elbow to the metacarpophalangeal joints and the tip of the thumb, with the wrist in a slight cock-up position and the thumb extended and elevated. The cast is bivalved on

(*Continued on page* 64)

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the twelfth day, and guarded motions are instituted. The cast is discarded about the fourth week, and exercise is gradually increased. Useful function can be obtained only by operation. On the whole, results have been satisfactory.

NEW DEVICE FOR DISABILITY EVALUATION:

F. A. Hellebrandt, M.D., Sara Jane Hantz, M.S., and L. E. A. Kelso, B.S., Richmond, Va. In ARCHIVES OF PHYSICAL MEDICINE, 31:4:207, April 1950.

The last of a series of upper extremity ergographs is described, and the technic of application is presented. The evidence suggests that the grip ergograph is a useful device in the management of a large variety of clinical conditions associated with hand weakness. Illustrative records are reviewed. They demonstrate that ergography may be used to assay the initial status of the patient, measure progress under treatment, determine the end point of effective therapy and evaluate the magnitude of residual disability. The values of ergography in the adjudication of compensation claims and the appraisement of therapeutic methods are discussed. In conclusion, attention is drawn to the fact that the ergograph serves a dual purpose, being equally efficacious as a mensuration and as a therapeutic device.

A TRICEPS-SUBSTITUTE BRACE FOR QUADRIPLEGICS

Henry R. Shear, M.D., and A. Estin Comarr, M.D., Van Nuys, Calif. In ARCHIVES OF PHYSICAL THERAPY, 31:8:518, August 1950.

The ultimate objective of the treatment of patients with spinal cord injuries is to render them as independent as possible. This task is particularly difficult in quadriplegics who are extremely helpless. Fortunately, the biceps musculature, with its higher segmental motor supply, is spared in many cases while the triceps function is abolished at the same time. The presented brace takes advantage of this condition and, by restoration the muscle equilibrium, allows for sufficient function of the elbow joint. In turn, this permits the use of eating utensils, combs, brushes, and such, so important in daily life and so significant a factor for the improvement of the known behavior pattern of patients with spinal cord injury.

Our brace has a threefold purpose: (a) It offers resistive exercise for the biceps; (b) it acts as a cock-up splint for the hand; (c) it furnishes a better holder for eating devices than that previously described.

FRACTURES OF THE FEMORAL SHAFT

Charles Rombold, M.D., H. C. Anderson, M.D., H. O. Marsh, M.D., and J. F. Lance, M.D., Wichita, Kansas. In THE JOURNAL OF THE KANSAS MEDICAL SOCIETY, 51:8:369, August 1950.

The two aspects which make fractures of the femoral shaft an important problem are the economic and treatment factors. The multiplicity of methods of treatment and the total lack of agreement among the advocates of each method, as well as the conflict of reported results of the various methods of treatment, indicate confusion in the strategy of the attack on this problem.

The usual period of recumbency and traction is three months, depending on age, reduction, etc., and largely on some unknown and unpredictable factor of healing of fractures. After adequate callus has been achieved the apparatus is removed and active and passive physical therapy begun. After a week in bed upsupported the patient is allowed to walk with crutches with or without an additional brace support to his thigh depending on the confidence of the surgeon in the union of the fracture. The period of protection following the removal of the traction usually is about three or four months.

In evaluating his end results the surgeon may well utilize a formula long in use. The factors of this formula are:

- Appearance
  - Visual
  - X-ray
- Function
  - Range of motion in knee
  - Shortening
  - Angulation
  - Subjective complaints
- Economic
  - Percentage of economic loss

In conclusion may we emphasize again that in our hands and as well in those of the average surgeon, skeletal traction is at present the method of choice in the treatment of fracture of the shaft of the femur.

(*Continued on page* 66)

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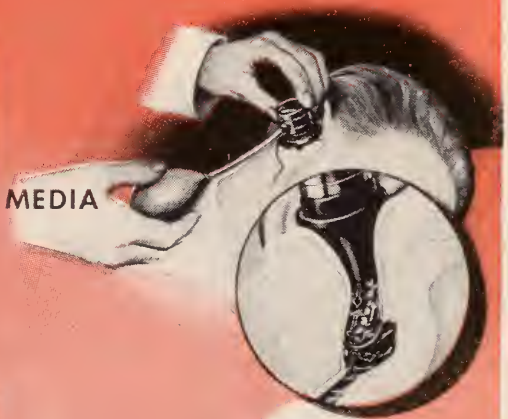
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Physical Medicine (Continued)

PROTECTION OF THE SKIN FROM SUNBURN: CORPORATION OF THE ABSORPTION SPECTRA OF SCREENING AGENTS AND THEIR EFFICACY IN ECZEMA SOLARE

Brian Russell, M.D., Lond., M.R.C.P., D.P.H., and Daphne Anderson, M.B. Lond., M.R.C.P. In THE LANCET, No. 6624, p. 247, August 12, 1950.

In the prevention of skin disorders caused by sunlight and the relief of those aggravated by light it is useful to know what spectral range of light must be excluded. In most of these disorders the wave-lengths concerned are shorter than 3300 A but longer than 2900 A, which is about the short wave-length limit of the summer sun in temperate zones. In this category fall acute and chronic solar dermatitis, light sensitization by sulphonamides and some other substances, zeroderma pigmentosum, and the initiation or aggravation of lupus erythematosus, herpes simplex recurrens, keratoses, and skin cancer. Most cases of eczema solare of Willan and summer prurigo of Hutchinson, which are now often grouped together as the "polymorphic light eruption" of Haxthausen, are also caused by this "sunburn spectrum", although in others violet and blue rays also play a part.

Protection against the sunburn spectrum is provided by a vanishing-cream type base containing tannic acid 5 per cent; quinine hydrochloride 5 per cent; pyribenzamine 5 per cent; sodium p-aminobenzoate 10 per cent; salol 10 per cent; or yellow soft paraffin 50 per cent. Any one of these creams may be used to prevent sunburn, but tannic acid is the first choice.

When these substances are used in the treatment of eczema solare and other light-activated diseases, a watch must be kept for skin tolerance to the light-screening active principle itself or to some component of the base. Almost any substance may occasionally cause contact eczema, but some are safer than others; of the above list, tannic acid is the most innocuous, followed by salol, sodium p-aminobenzoate, pyribenzamine, and quinine.

Sodium p-aminobenzoate should not be used

(*Continued on page 68*)



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UNTIL her physician can observe and treat her symptoms, many a woman, even today, faces the failing fires of the menopause with confusion . . .

Physicians who are no longer satisfied with the limited action of replacement therapy alone, are electing to use a MORE COMPREHENSIVE TREATMENT for menopausal disturbances. Specifically designed for this purpose, Tablet Phen-Orivan, Dorsey provides, in addition to estrogenic substances:

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if there has previously been sensitization to sulphonamides or benzocaine.

Yellow soft paraffin is an effective screen when added to creams in proportions of 50 per cent or more, but its occlusive and "heating" properties may cause discomfort. In proportions of 25 per cent and less it does not screen but, on the contrary, has an intensifying effect in the sunburn spectral range.

The type of base used has a marked influence on the efficacy of light-screening agents. The vanishing-cream type of base is both effective and of good cosmetic quality.

In the more unusual cases of sensitization to the violet-blue region of the spectrum, these substances are ineffective and recourse must be had to physical screens, but these are only partially effective.

REHABILITATION OF THE LOWER EXTREMITY AMPUTEE IN A LARGE GENERAL HOSPITAL

Ward M. Schultz, M.D., New York City. In NEW YORK STATE JOURNAL OF MEDICINE, 50:17:2061, September 1, 1950.

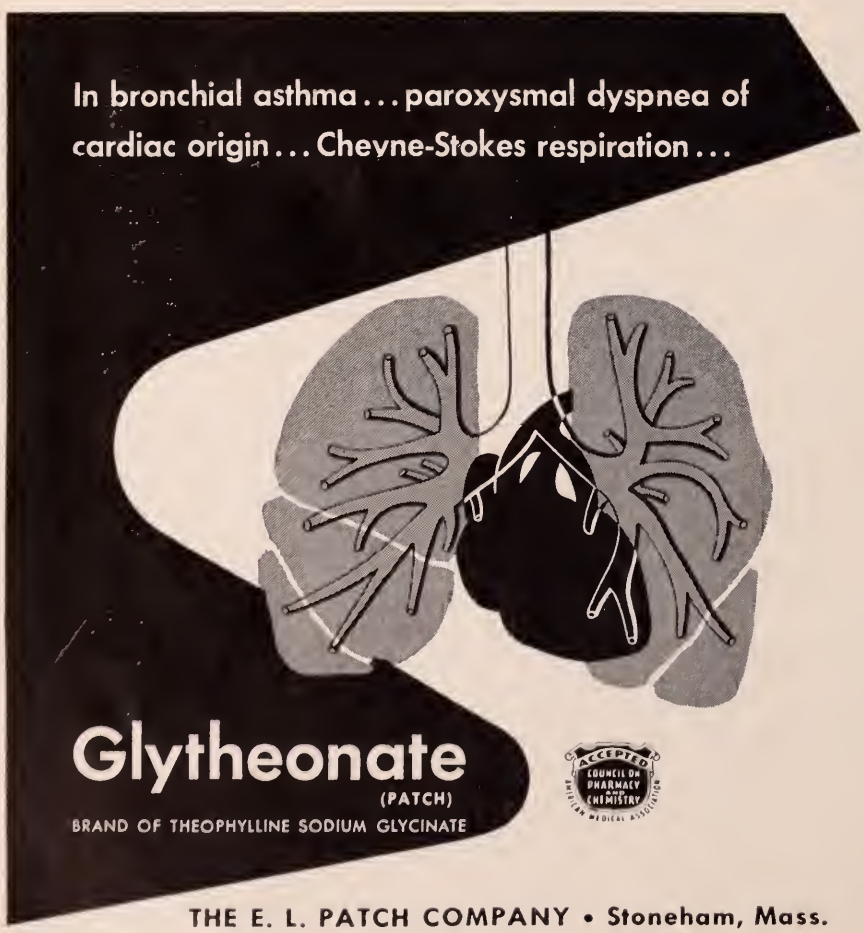
Rehabilitation of the amputees has been defined as the endeavor to achieve the maximum function and adjustment of the amputee and to prepare him physically, mentally, socially, and vocationally for the fullest life compatible with his abilities and disabilities. It is the objective at Bellevue Hospital not only to fill in the gap between surgeon and limb maker, but also carry the patient well beyond this stage so as to permit that patient the fullest possible life. The physician practicing physical medicine and rehabilitation at Bellevue learns the problems of the surgeon, develops an intimate knowledge of the types and working of available protheses, studies the problems of the limb maker, follows through with the training of the amputee on the Rehabilitation Wards, and evaluates his work potentialities.

From the analysis of the data presented, it appears that in a prosthetic program in a general hospital such as Bellevue the following conditions will be met:

(1) At least two-thirds of the amputees seen will be males.

(2) About 70 to 75 per cent of the lower

(*Continued on page 70*)



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*Council on Pharmacy & Chemistry: New and Nonofficial Remedies, 1950, Philadelphia, J. B. Lippincott Company, 1950, p. 285.

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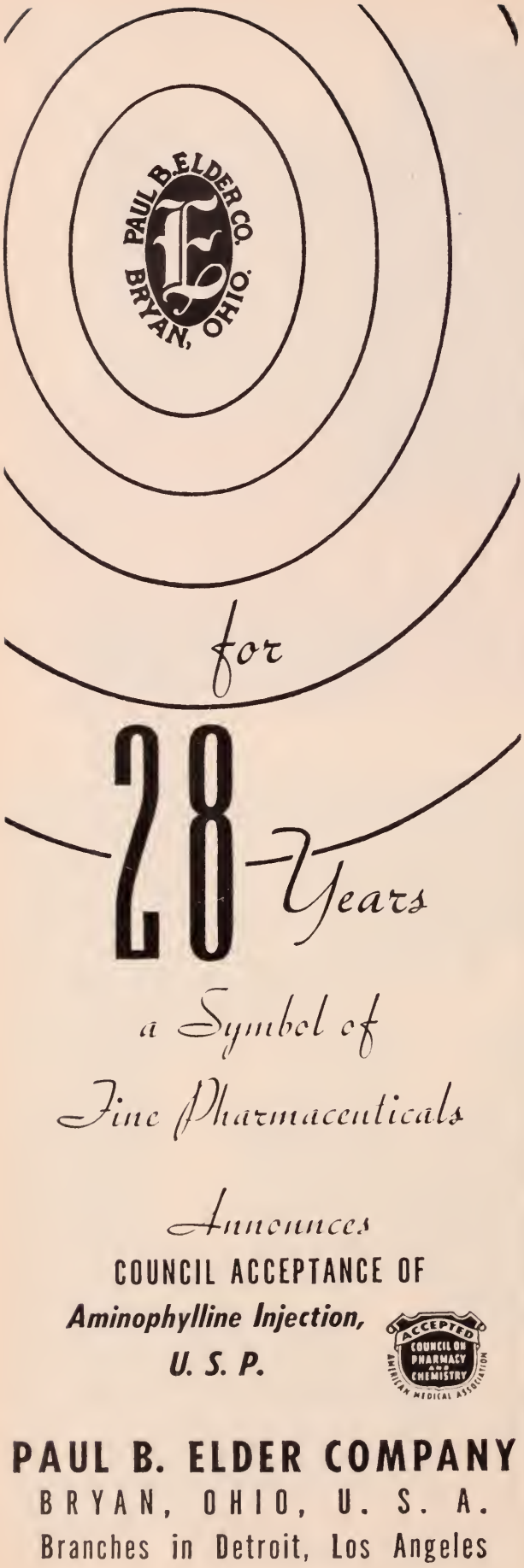
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Physical Medicine (Continued)

extremity amputations will be due to peripheral arteriosclerosis with or without diabetes mellitus.

(3) About 50 per cent will be unilateral, above-knee amputations and 25 per cent unilateral, below-knee amputations.

(4) At last 50 per cent cannot adequately use prosthetic appliances because of age, lack of skill, severe intercurrent disease, contractures, or unreliability of the patient.

(5) The ability to perform an adequate swing-through gait on crutches is a reliable test for the skill necessary to use an above-knee prosthesis.

(6) The degree of skill needed to use a below-knee prosthesis is much less than that required for an above-knee prosthesis.

(7) With the proper case selection, specific prosthetic prescription to meet the individual need, proper fitting and adjustment, and adequate training, excellent results can be obtained in this type of amputee, even in the older age groups.

CEREBRAL PALSY: MEDICAL CONSIDERATIONS AND CLASSIFICATION

Temple Fay, M.D., Philadelphia. In THE AMERICAN JOURNAL OF PSYCHIATRY, 107:3: 180, September 1950.

Cerebral palsy is a new field of medicine that has emerged in the last five years. It has grown so rapidly that the profession has scarcely had time to recognize it and become fully aware of its progress.

"Cerebral palsy" is a term popularized by Phelps and adopted by the lay public to designate types of paralysis, incoordination, tremor, and crippling effects that arise from lesions of the brain, in contradistinction to injuries or disease of the spinal cord, the peripheral nerves, or the extremities themselves.

The important objectives in this field chiefly concern diagnostic screening and rehabilitation. The lessons learned here, as well as those learned in the management of acute and chronic phases of cerebral trauma, tumors, and organic lesions of the brain arising in later life, have made possible combinations of physical therapy, pattern movements, and therapeutic exercises that are now known to the profession and have proved to be of benefit to the patient. Adults who suffer

(Continued on page 72)



at the first sign of a cold

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Physical Medicine (Continued)

a cerebral accident or injury now have the benefit of the work already accomplished in the army rehabilitation centers and the classification, education, and vocational training so far established for children and young adults.

Diverse as the medical problem may be, greater problems exist in the fields of education and training. Here the physical therapist, the psychometrist, the speech therapist, and the occupational therapist, the social worker, and the trained rehabilitationist have attempted to solve the needs for the various ages and for various degrees of handicapping conditions. The educational and rehabilitation groups have been quick to realize the practical difficulties.

The problem is of primary concern to the medical profession. The rapid growth of lay clinics throughout the country has created a great demand for trained medical personnel, trained physical thrapists, and speech and occupational therapists. The communities have come to realize that no such trained personnel exists in adequate degree, and no such demand could possibly be met with the means now available for training small groups under personal direction. An attempt has been made to bring to the younger members of the profession the opportunities of postgraduate medical training in this new and extensive field.

Although some of the pioneering work has been done in the field of medicine (Crothers, Phelps, Carlson, and Deaver), there still remains much that must be clarified.

SCIATIC SCOLIOSIS

Samuel Kleinberg, M.D., New York, N. Y. In THE AMERICAN JOURNAL OF SURGERY, 80:3:332, September 1950.

In the acute phase rest and gentle physical therapy are most helpful. These may be supplemented by strapping of the back, wearing of a low back belt, corset or a plaster of paris jacket. The affected sciatic nerve should then be stretched by reflexing the limb at the hip with the knee in complete extension. This maneuver should be carried out very slowly. At least ten minutes should be spent in stretching the nerve. This type of manipulation has two

(*Continued on page 74*)

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Physical Medicine (Continued)

dangers, namely, dislocation of the hip and rupture of the sciatic nerve.

When the plaster is removed, the patient is still kept in bed for a week or ten days while the brace is being made. During this time the patient is instructed in mild exercises for his back and leg. These he performs three times a day, increasing the number and strenuousness of the exercises gradually.

When the brace is finished, it is applied and the patient is permitted to sit up in bed or on a chair, then to stand and finally to walk. The patient's activity is increased slowly; and when he can get about freely, he is discharged to office care. Physical therapy in the form of baking and massage accelerates the recovery. The brace should be worn for three to six months and replaced by a low back canvas belt. The patient usually can return to his customary occupation, if it is not laborious, in about three months. In those who have to perform hard labor the convalescence should be prolonged at least six months.

Sciatic scoliosis is a symptom complex arising from disorder in the lower back. This clinical syndrome is of frequent occurrence, being found chiefly in otherwise healthy individuals between twenty and fifty years of age. The most important problem in this syndrome is to identify and localize the essential causal pathologic lesion. Fortunately, the lesion is readily recognized by a careful history and a methodical examination. The vast majority of patients suffering from sciatic scoliosis can be relieved by conservative measures. Attention has been directed to the value of manipulation and stretching of the back and the affected sciatic nerve in instances of chronic sciatic scoliosis. The technic of the stretching has been described and is recommended because of the high per cent of complete recoveries. In the refractory cases of myositis and herniated intervertebral discs surgery can be utilized to obtain a cure.

COMMON HAND INJURIES

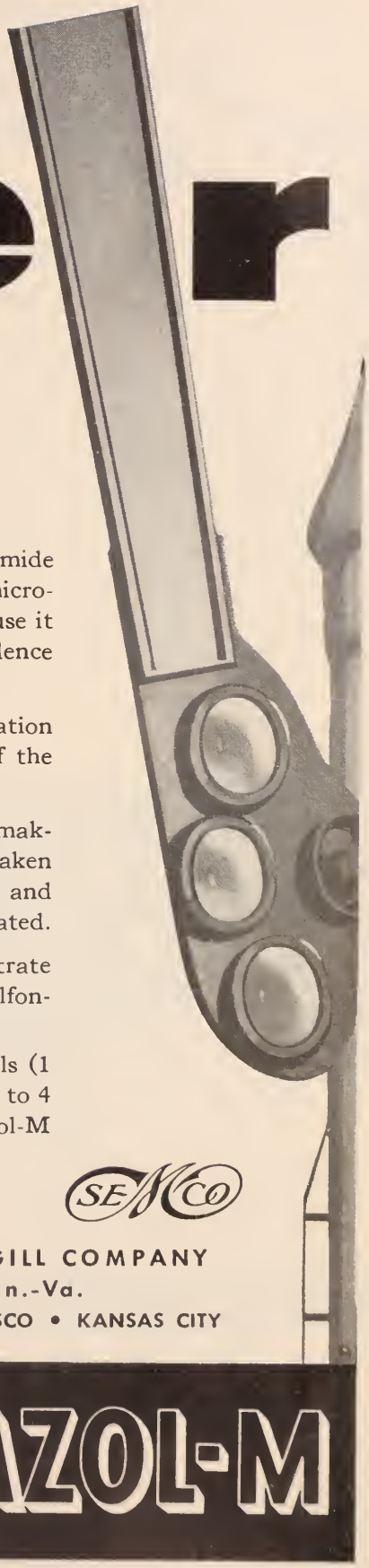
F. W. Barden, M.D., Medical Director, Saco-Lowell Shops, Biddeford, Maine. In THE JOURNAL OF THE MAINE ASSOCIATION, 41:7:267, July 1950.

Rehabilitation of hand injuries should begin

(Continued on page 76)

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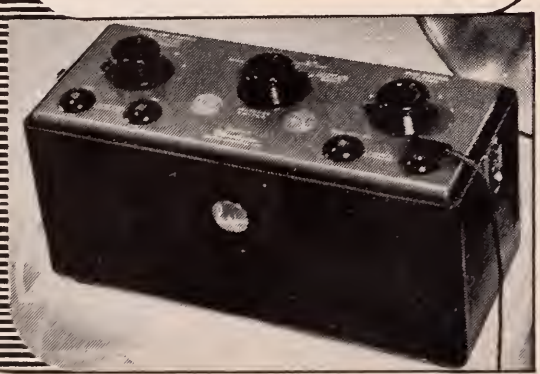
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Physical Medicine (Continued)

as soon as the accident has occurred. Proper treatment will help to keep the disability to a minimum. Often, just a chance remark to the injured employee at the time of accident may have a bearing on his future disability and rehabilitation. If splinting is required only that which is absolutely necessary should be used — keeping the rest of the hand mobile. Passive motion is started as soon as it is safe to do so and, as soon as possible, hydrotherapy with whirlpool baths are begun. Exercise of the fingers is encouraged by having the patient work with varying sized rubber balls while receiving the whirl-pool. Massage is used considerably. Other exercises also are used to increase finger motion gradually — from gross movement to fine movement. We advocate the use of knitting, crocheting, etc., to facilitate fine finger motion.

Summary: (1) Hand injuries are more prevalent than suspected.

(2) Hand injuries should be given the same "high lighting" in an industrial program as does injuries to the eye.

(3) Selective placement of employees will decrease hand accidents.

(4) Proper immediate treatment of all hand injuries is essential. (Try to give treatment during the "golden period" which is six hours post trauma.)

(5) All wounds to the hand should be considered contaminated at time of injury.

(6) Rehabilitation of hand injuries should begin as soon as the accident has occurred.

(7) Attempt to get the injured employee back on the job as soon as possible.

THE MANIPULATIVE TREATMENT OF LOW BACK PAIN

Howard J. Schaubel, A.B., M.D., Grand Rapids, Mich. In THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, 49:8:913, August 1950.

The principles of the conservative treatment of low backache should include more than rest, heat, braces and massage. An attempt should be made to understand the pathology in the many cases of low backache wherein the x-rays and physical examination throw no light on the cause. All joints, whether deeply or superficially situated in the body, are susceptible to

(*Continued on page* 78)

how the Paredrine in Par-Pen helps its penicillin fight intranasal infection

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Physical Medicine (Continued)

similar kinds of trauma, and will react alike to injury as well as to treatment. Low back pain of indifferent or indeterminate character should be thought of as an interarticular joint and adjacent soft parts injury, and treated according to the accepted methods used in the care of extremity joint sprains, strains, and dislocations.

The author has noted no ill effects following the manipulative procedure without anesthesia in over 500 patients. Spinal manipulation is not presented as a cure for all cases of low back pain; it is merely another means of attack for a difficult problem, and is not always sufficient in itself.

Spinal manipulation is a useful adjunct in the treatment of low back pain.

A complete history, review of systems, physical examination and roentgen evaluation must be done before manipulation is performed.

There are contraindications to manipulation.

Where there is demonstrable pathology other than an intervertebral disc injury or muscle spasm, manipulation is neither performed nor advised.

Patients with poor cardiac reserve constitute a definite risk to manipulation.

THE THIMBLE ELECTRODE: A DEVICE FOR THE RAPID LOCALIZATION OF MOTOR POINTS

L. C. Sarnoff and S. J. Sarnoff, M.D., Boston. In ARCHIVES OF PHYSICAL MEDICINE, 31:7: 448, July 1950.

The consistency and rapidity of motor point localization was found to be greatly improved by a new device, which provides for the incorporation of a stimulating electrode in a flexible plastic thimble worn on the index finger.

The first WHO Anti-Tuberculosis Centre is being established in Istanbul, Turkey, with generous financial assistance from the Turkish Health Ministry and the Anti-Tuberculosis League of Istanbul. This demonstration and training centre in tuberculosis control will be open to foreign students.

Three WHO teaching-training centres for tuberculosis control are to be opened in India this year, probably in New Delhi, Patna and Trivandrum, to train medical workers in the prevention, diagnosis, and treatment of tuberculosis.

140 anti-tuberculosis clinics are being equipped in Poland by UNICEF with WHO technical assistance. The first shipment of 30 X-ray units provided by UNICEF left Rotterdam for Gdynia this month. WHO Newsletter, February-March 1950.

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BOOK REVIEWS



Essential Urology. By Fletcher H. Colby, M.D., Chief of the Urological Service, Massachusetts General Hospital, Boston. Cloth. $8. Pp. 580, with 342 illustrations. The Williams & Wilkins Company, Mt. Royal & Guilford Aves., Baltimore 2, 1950.

This is the best volume that has come to the attention of this reviewer as a textbook on urology for students and general physicians. With brevity and accurate factual presentation, the embryology, anatomy, and physiology of the urinary tract is extremely well done. The volume contains eleven chapters on diseases of the various genital urinary organs. The brevity and clarity with which the pathology, the incidence, the symptoms, the diagnosis, and accepted treatment is handled in the case of each disease is, to say the least, very well done. The volume is not cluttered up with excessive wordiness and many debatable schemes. Adequate references are made at the end of each chapter that would permit, anyone interested, in further reading of the literature.

At the price of $8.00, this urological volume should be an excellent reference for any practitioner of medicine, irrespective of his interest, be it general practice or any specialty.

H. E.

Histology, by Arthur Worth Ham, M.B. Professor of Anatomy, in charge of Histology, in the Faculties of Medicine and Dentistry, University of Toronto, Toronto, Canada. 445 figures, 756 pages. $10.00. J. B. Lippincott Co., Philadelphia, 1950.

This book is another product of The Department of Anatomy at Toronto, which has lately been the source of several excellent anatomy texts. In this book the emphasis is on correlation of histology with medicine as a whole, and the author is successful in making histology more interesting and easier for the student to remember by this means. The many photomicrographs are excellent; where necessary they are supplemented by drawings and diagrams. The section on growth and development of bone and cartilage is particularly good. Dr. Ham's style is easy and readily understood. He emphasizes aspects of histology associated with current trends in medicine, for instance adrenal histology, and correlates them with gross anatomy, physiology and pathology. This is an excellent histology text.

J. C. S.

The Practice of Medicine: by Jonathan Campbell Meakins, C.B.E., M.D., D.Sc., Formerly Professor of Medicine and Director of the Department of Medicine, McGill University; Formerly Physician-in-chief, Royal Victoria Hospital, Montreal; Formerly Professor of Therapeutics and Clinical Medicine, University of Edinburgh; Fellow of the Royal Society of Edinburgh; Fellow of the Royal Society of Canada; Fellow of the Royal College of Physicians, London; Fellow of the Royal College of Physicians, Edinburgh; Honorary Fellow of the Royal College of Surgeons, Edinburgh; Fellow of the Royal College of Physicians, Canada; Fellow of the American College of Physicians; Honorary Fellow of the Royal Society of Medicine. 5th Edition, 518 illustrations, 1558 pages, C. V. Mosby Co., St. Louis, 1950.

This is the 5th edition of this popular textbook of

(Continued on page 82)

Patient Under Treatment

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BOOK REVIEWS (Continued)

medicine, the 4th edition having been published in 1944, and the original edition in 1936.

Although certain sections are written by Dr. Meakins' associates, this book is largely the product of one man and a few assistants. When the author is a man of the caliber of Dr. Meakins one expects an outstanding book, and the expectation is fulfilled in the present edition.

The outstanding feature of this book is the medical writing. Descriptions are concise, exact and vivid; medical terms are used in a precise manner; yet the tendency towards obscurity and profundity which is far too common in present medical writing is absent. In other words, the author has the all too rare ability to write exactly what he means.

A new chapter on psychosomatic medicine has been added and this is excellent. There is a chapter on antibiotics and chemotherapy which contains general principles that apply to the new antibiotics as well as the old. The disadvantages of the books are those of the times—medical progress under our free enterprise system has been so rapid in the past few years that even the journals are outdated.

The illustrations are abundant and adequate.

J. C. S.

CARDIOVASCULAR DISEASE: Fundamentals, Differential Diagnosis, Prognosis and Treatment. Louis H. Sigler, M.D., F.A.C.P., Attending Cardiologist and Chief, of Cardiac Clinic, Coney Island Hospital; Consulting Cardiologist, Roackaway Beach Hospital; Consulting Cardiologist, Menorah Home and Hospital for the Aged. Publishers: Grune & Stratton, New York, 1949. 551 pages. Price: $10.00

To the long list of books on Cardiovascular disease, another text has been added. Although some sections of material are fairly well discussed, this volume offers nothing distinctive. There is a good discussion of anatomy and physiology, treatment of congestive failure, coronary occlusion and myocardial infarction. Electrocardiography is given only cursory mention. There are frequent grammatical errors. In the opinion of the reviewer, this volume does not measure up to a good treatise on such a comprehensive subject.

J. W. F.

CLINICAL ELECTROCARDIOGRAPHY: Francis F. Rosenbaum, M.D., Assistant Clinical Professor of Medicine, Marquette University School of Medicine; Staff, Milwaukee County Hospital; Associate Staff, Columbia Hospital; Adjunct Staff, Milwaukee Children's Hospital; Cardiac Consultant and Attendant, Cardiac Clinic, Milwaukee Children's Hospital, Milwaukee, Wisconsin. Reprinted from Oxford Loose-Leaf Medicine with the same page numbers as in that work. Publishers: Oxford University Press, New York. 1950. Price: $4.50

This small book is a reprint from the Oxford Loose-Leaf Medicine. The fundamentals and clinical interpretations of electrocardiographic tracings are pre-

(*Continued on page* 84)

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[1]Hansel, F.K.: Ann. Allergy, 5:397, 1947

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sented in an orderly manner, covering the physiological physics, the mechanisms of cardiac function, and cardiac pathology. The fundamentals are clearly written in a concise manner. Electrocardiography has made great advances with the addition of unipolar limb and precordial leads. The author presents in an excellent way the value of unipolar interpretation. Brief mention is made of vector interpretation and since the unipolar interpretation is done so well, more space should have been devoted to vectors.

J. W. F.

BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

NATURAL CHILDBIRTH — A Manual for Expectant Parents: By Frederick W. Goodrich, Jr., Prentice-Hall, Inc., New York; 176 pages. $2.95.

WHEN MINDS GO WRONG — A Simple Story of the Mentally Ill, Past, Present and Future: By John Maurice Grimes, M. D., twenty years a psychiatrist, four years a staff-member of the Council on Medical Education and Hospitals of the American Medical Association. Author of "Institutional Care of Mental Patients in the United States". First Edition. Illustrations by K. Alexandra White. 237 pages. Published and distributed by the author, 5209 S. Harper Avenue, Chicago, 15, Illinois. $5.00.

ADVANCES IN INTERNAL MEDICINE. Volume IV. Editors: William Dock, M. D., Long Island College of Medicine, Brooklyn, N. Y., and I. Snapper, M. D., The Mount Sinai Hospital, New York, N. Y. Associate Editors: Tinsley R. Harrison, M. D., Medical College of Alabama, Birmingham, Alabama, Chester S. Keefer, M. D., Evans Memorial and Massachusetts Memorial Hospitals, Boston, Mass., Warfield T. Longcope, M. D., Cornhill Farm, Lee, Mass., J. Murray Steele, M. D., Goldwater Memorial Hospital, New York University Division, Welfare Island, New York. 549 pages. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago. $10.00.

FOOD ALLERGY. By Herbert J. Rinkel, M. D., F. A. C. P., F. A. C. A., F. A. A. A. Formerly, Associate Instructor in Medicine, University of Oklahoma, School of Medicine, Theron G. Randolph, M. D., F. A. C. A., F. A. A. A., A. A. C. P., Instructor in Medicine, Northwestern University Medical School, Michael Zeller, M. D., F. A. C. A., F. A. C. A., F. A. A. A, Clinical Instructor in Medicine, University of Illinois, College of Medicine. 492 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $8.50.

PHARMACOLOGICAL BASIS OF PENICILLIN THERAPY. By Karl H. Beyer, Ph. D., M. D., F. A. C. P., Director of Pharmacological Research, The Medical

Research Division, Sharp and Dohme, Incorporated, Glenolden, Pennsylvania. 214 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $4.50.

THE EXTERNAL SECRETION OF THE PANCREAS. By J. Earl Thomas, M. D., Professor of Physiology, Jefferson Medical College of Philadelphia, Philadelphia, Pennsylvania, 149 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $3.50.

SKULL FRACTURES AND BRAIN INJURIES. By Harry E. Mock, M. D., Consulting Surgeon, St. Luke's Hospital, Chicago, Associate Professor Emeritus of Surgery, Northwestern University Medical School, Chicago. 806 pages. The Williams & Wilkins Company, Baltimore, 1950. $13.50.

METHODS IN MEDICINE — The Manual of the Medical Service of George Dock, M. D., Sc. D., Formerly Professor of Medicine, Washington University School of Medicine; Formerly Physician-in-Chief, Robert A. Barnes Hospital, St. Louis. A Comprehensive Outline for Clinical Investigation, Management, and Treatment of Patients with Various Medical Disorders, by George R. Herrmann, M. D., Ph. D., Professor of Medicine, University of Texas Medical Branch at Galveston: Director of the Cardiovascular Service and Heart Station, University of Texas Hospitals, Consultant in Medicine to the Surgeon General, U. S. Army; Consultant in Vascular Diseases to the Marine Hospital, U. S. P. H. S. Second Edition, Completely Revised. 488 pages. The C. V. Mosby Company, St. Louis, 1950. $7.50.

PHYSIOLOGY OF THE EYE — Clinical Application. By Francis Heed Adler, M. A., M. D., F. A. C. S., William F. Norris and George E. de Schweinitz, Professor of Ophthalmology, School of Medicine, University of Pennsylvania, and Consulting Surgeon, Wills Hospital, Philadelphia. 709 pages, with 319 illustrations, including 2 in color. The C. V. Mosby Company, St. Louis, 1950. $12.00.

INDICATIONS FOR AND RESULTS OF SPLENECTOMY. By Frederick A. Coller, M. D., Alexander Blain, III, M. D., Gould Andrews, M. D., From The Departments of Surgery and Medicine, University of Michigan Medical School, Ann Arbor, Michigan, 97 pages, Charles C. Thomas, Publishers, Springfield, Illinois. $2.25.

THE PREPARATION OF PHOTOGRAPHIC PRINTS FOR MEDICAL PUBLICATION. By Stanley J. McComb, F. B. P. A., Section on Photography, Mayo Clinic, Rochester, Minnesota. 65 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $2.00.

THE CLINICAL USE OF TESTOSTERONE. By Henry H. Turner, M. D., F. A. C. P., Clinical Professor of Medicine, School of Medicine, University of Oklahoma, Oklahoma City, Oklahoma, 69 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $2.25.

THE EXCEPTIONAL CHILD IN INFANCY AND EARLY CHILDHOOD — Proceedings of the Annual Spring Conference on Education and the Exceptional Child of the Child Research Clinic of The Woods Schools, A Private School for Exceptional Children, Langhorne, Pa., May 1950. 48 pages.

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. . .Since the war, there has been amazing progress in the field of agriculture, particularly in the development of new economic poisons. It is believed that the public is fully informed regarding the abilities of DDT, but it is doubted that many people are informed concerning other insecticides that are far more toxic to insects and, unfortunately, also to human beings. Formerly, lead, arsenic, copper, sulfur, and fluorides were largely used, but they have given way to the more potent organic compounds.

. . .The success that the use of DDT achieved as an insecticide stimulated research in the field of organic insecticides, with the result that several new products have been marketed prior to the accumulation of sufficient data regarding their toxicity to warm-blooded animals. Space does not permit reference to the data concerning the toxicity of these various insecticides that appear in a gradually increasing literature on the subject. Whereas chlorinated organic compounds such as DDT, chlordane, benezene hexachloride (gammexane) and chlorinated camphene have been used with some adverse effects, most industrial hygienists are acutely aware of the problems presented by the use of the organic phosphates such as hexaethyltetraphosphate (HETP), O, O-diethyl, O-p-nitrophenylthiophosphate (Parathion) and tetraethylpyrophosphate (TEPP) because these substances have been proved to be more toxic to human beings and several deaths have been reported as a result of their use. Parathion has, perhaps, received the greatest attention, and two of the concerns manufacturing it have had extensive animal experiments performed to evaluate the toxicity of this compound.

. . .Another occupational disease hazard that, although not new, has recently received nationwide attention is that occasioned by the use of shoe-fitting fluoroscopes. Studies have been made in Detroit, New York City and Cleveland, as well as some of the states, including Massachusetts, of the hazards to employees operating these machines and to the public. One study indicated that the chief hazard is occasioned

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by the use of old machines, which were not properly constructed or protected, and by the fact that the persons operating these machines have not been properly trained in the use of x-ray equipment and do not appreciate the potential dangers from the use of such equipment.

Some of the concerns that repair these machines have indicated that they can be adequately shielded to reduce the scatter radiation to a minimum. It is also possible to reduce the intensity of x-rays to the foot of the person using the machine by reducing the current utilized by the tube, by providing a protected 1-mm.-thick aluminum filter and by utilizing a high-quality fluorescent screen. If, under the above conditions, the timing mechanism is properly set to limit the exposure to five seconds, during which an adequate fitting can be made, the dose in the foot chamber will be 1r. *Excerpt: Newer Occupational Diseases, John B. Skinner, Boston, New England J. M., Sept. 28, 1950.*

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ON THE WITNESS STAND

. . .A witness should always be as polite and courteous in answering questions put to him on cross-examination by counsel for the other side as he is in answering those of counsel who called him to testify. Do not let your feathers get ruffled if opposing counsel does not seem quite as polite and courteous to you as counsel for your side. The chances are he is needling you for the express purpose of getting you angry.

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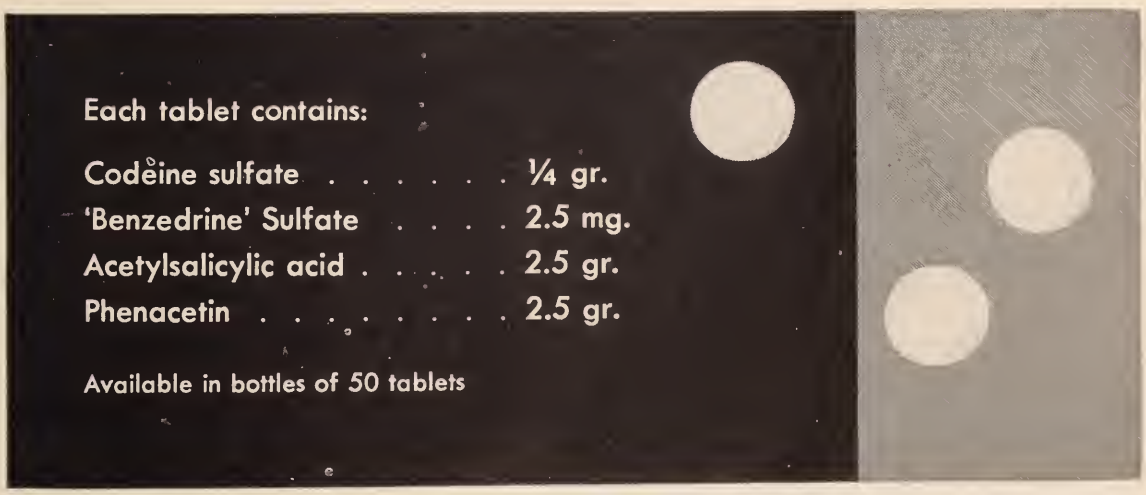
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1. Long, C-F.: A Controlled Industrial Study of an Analgesic Compound,
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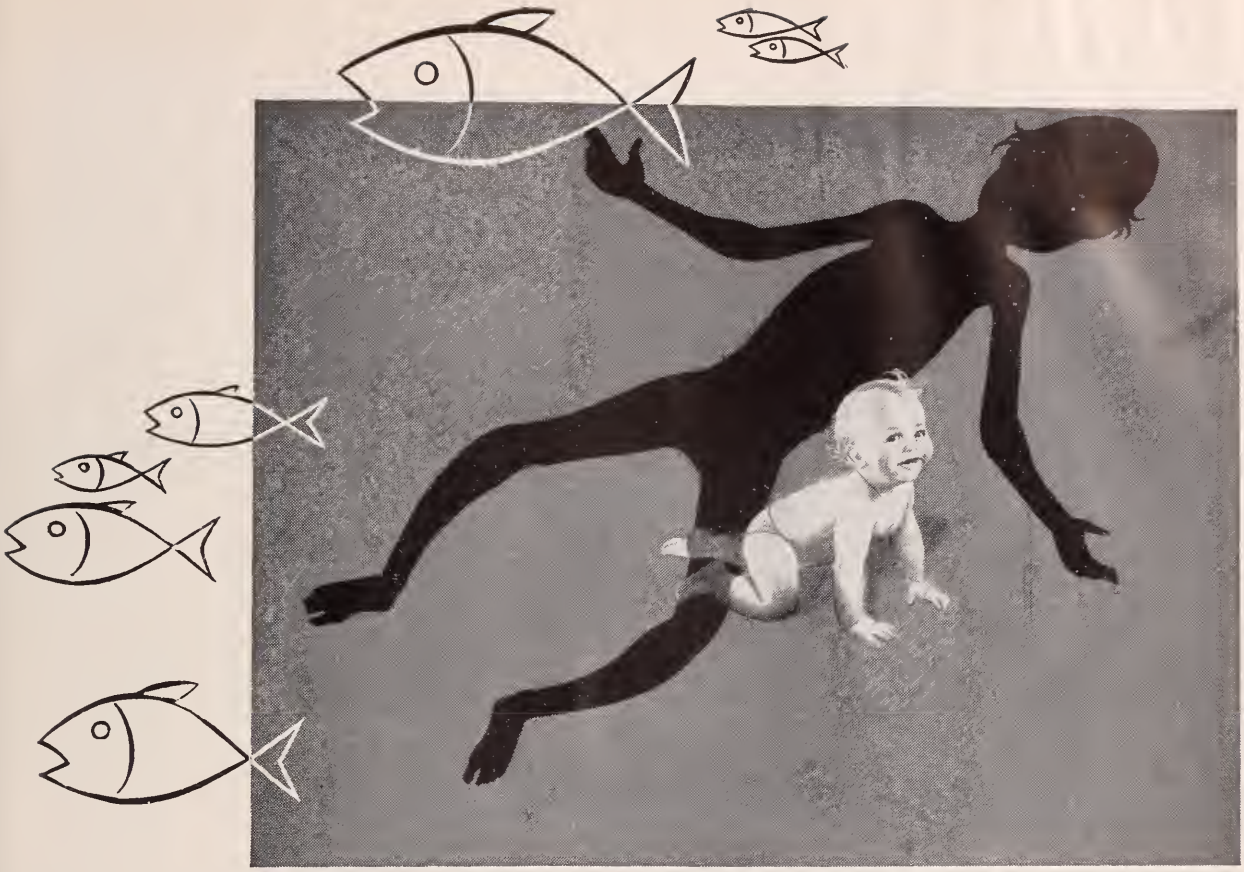
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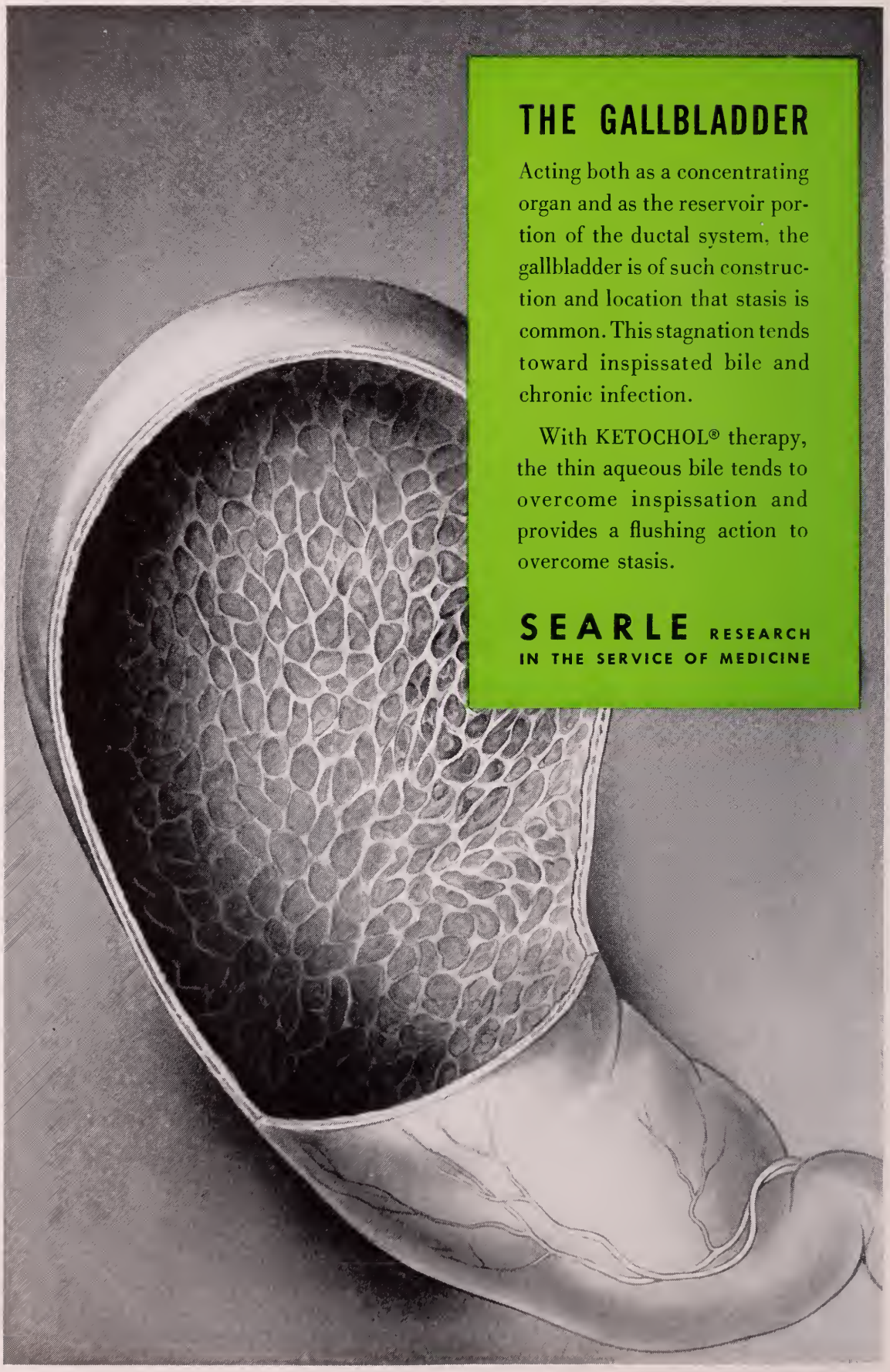
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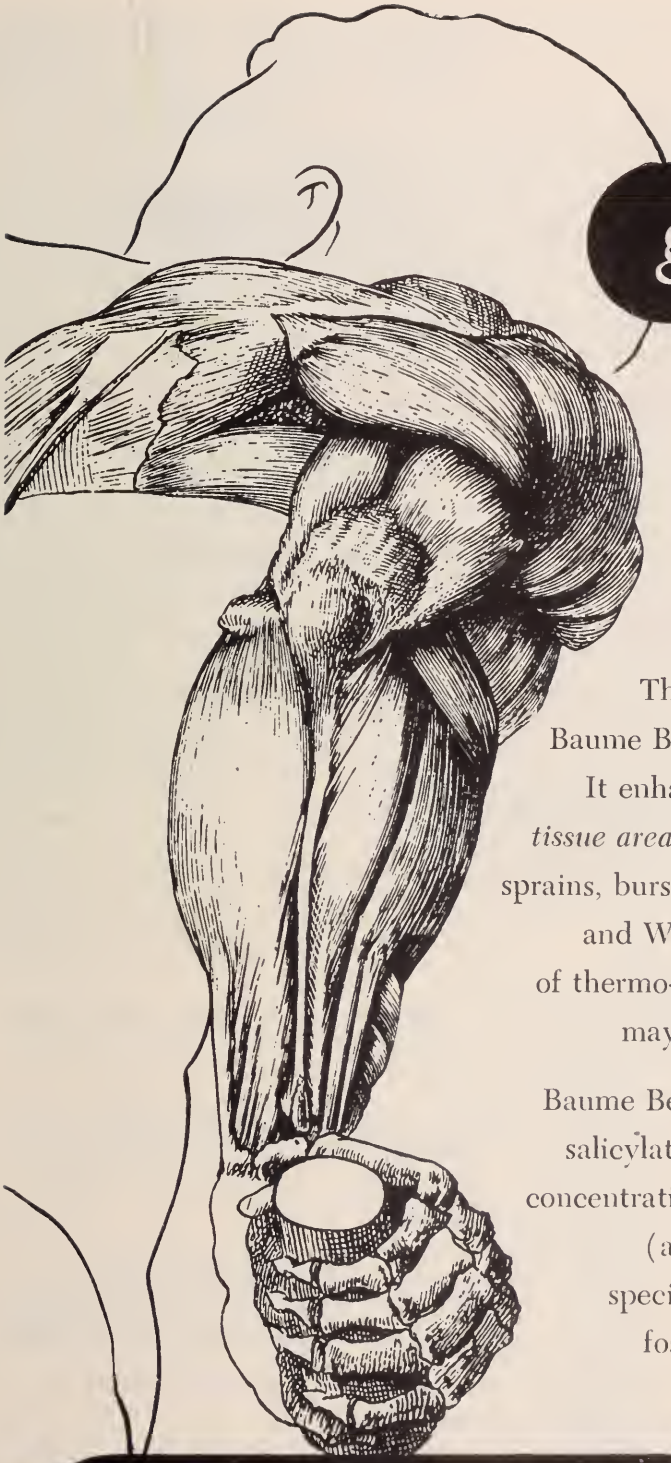
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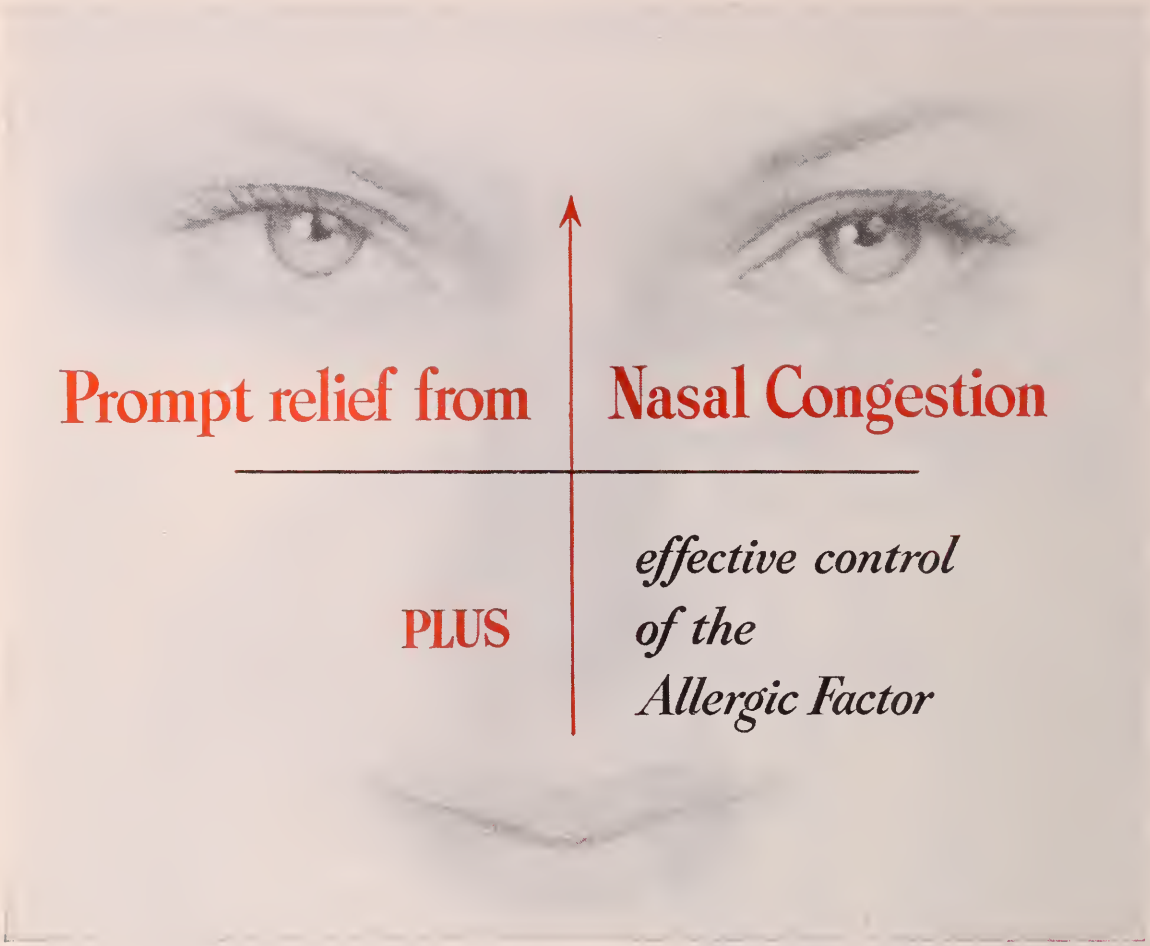
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1. Lange, M., and Weiner, D. J. Invest. Dermat. 12:263 (May) 1949.

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1. Postgrad. Med. 4:413, 1948. • 2. M. Rec. & Ann. 42:673, 1948. • 3. Am. Pract. 2:643, 1948.

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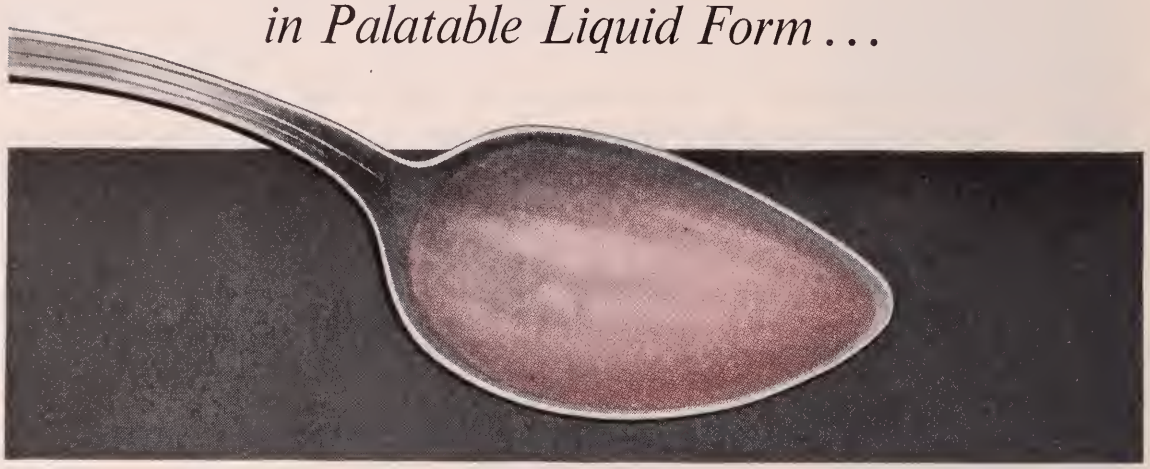
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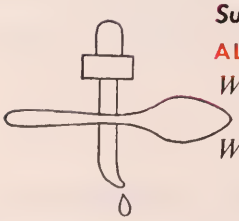
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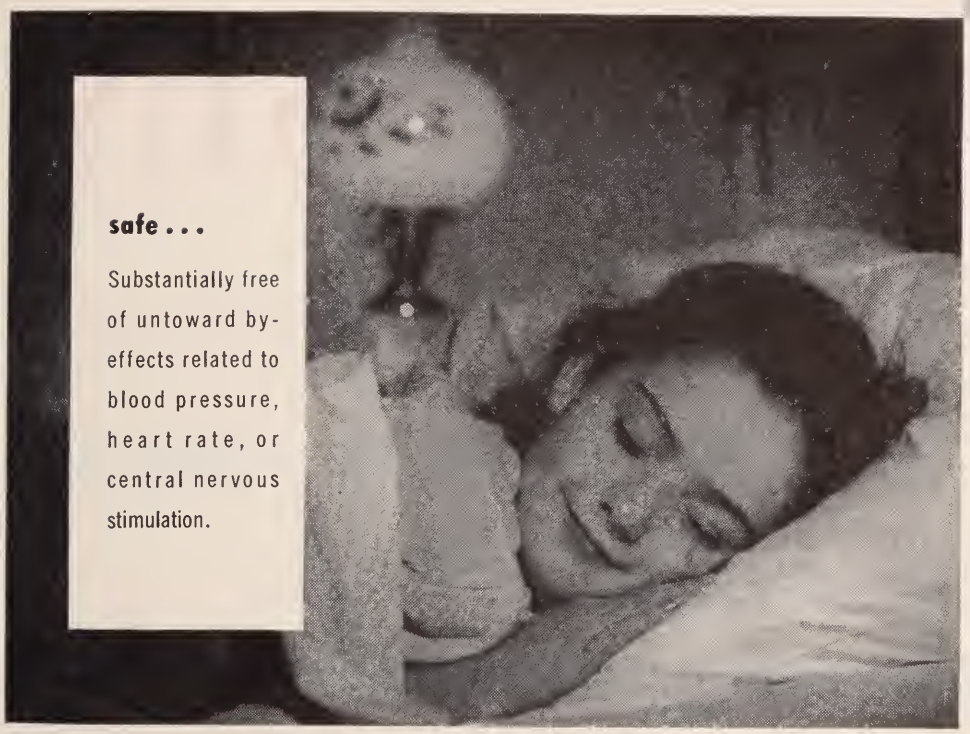
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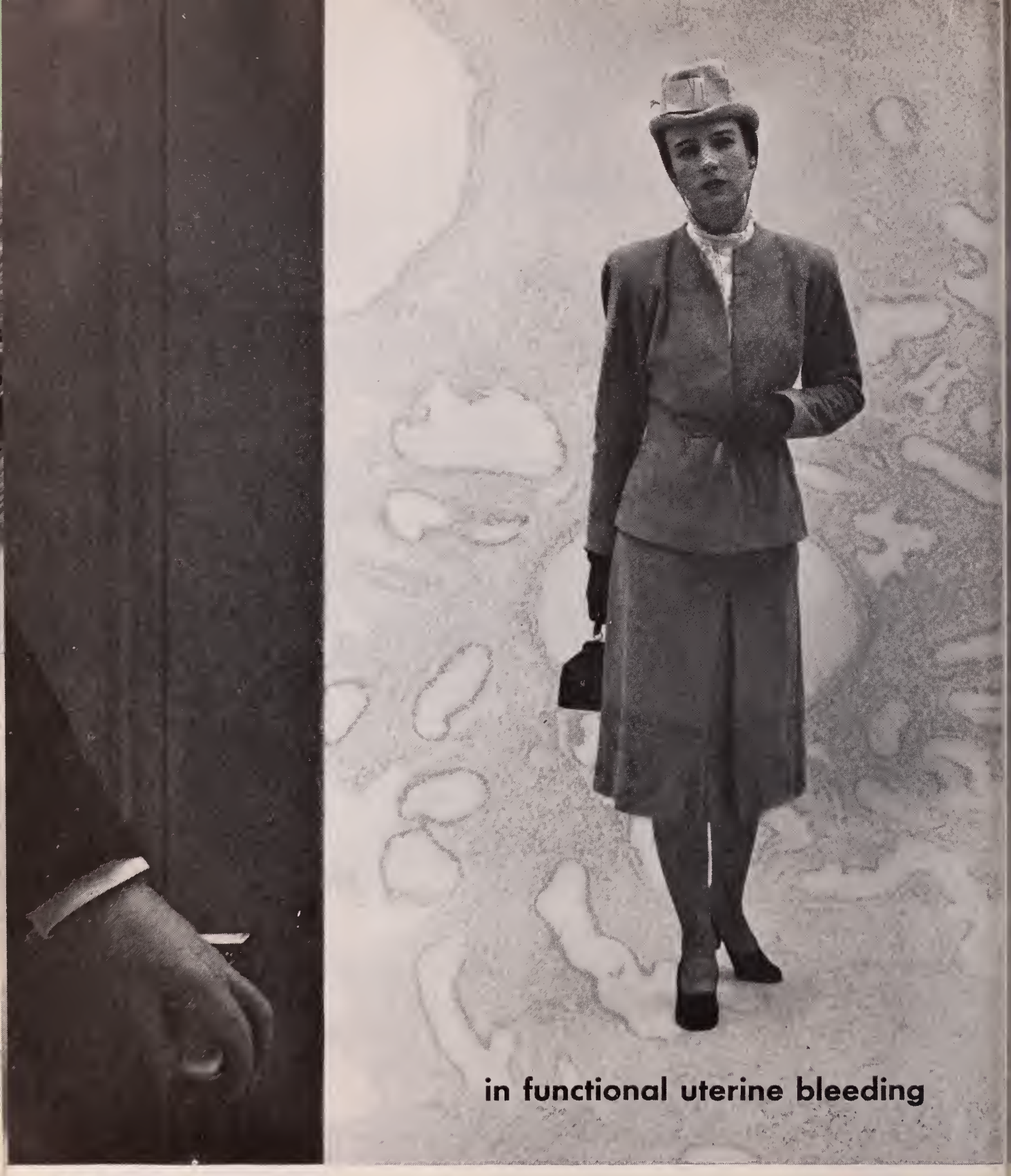
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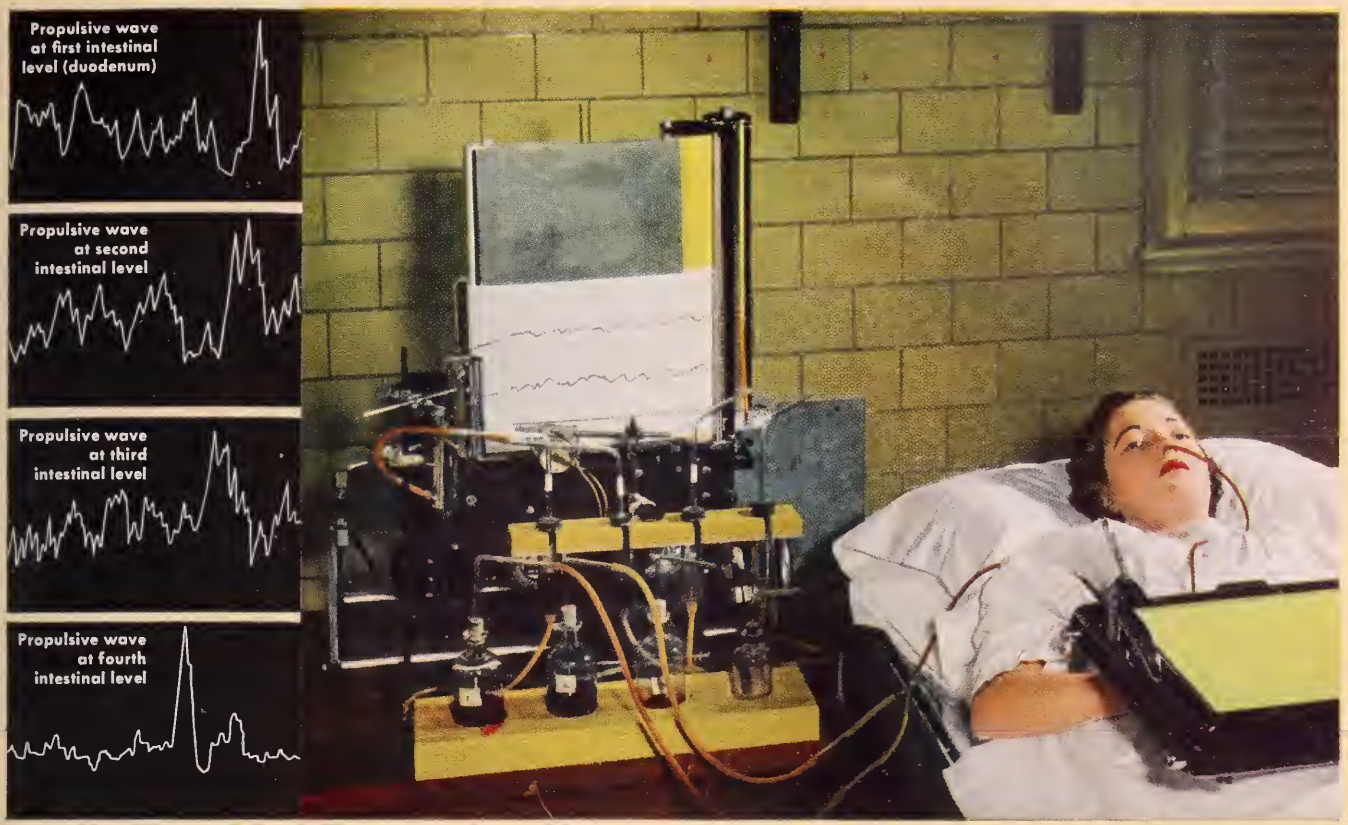
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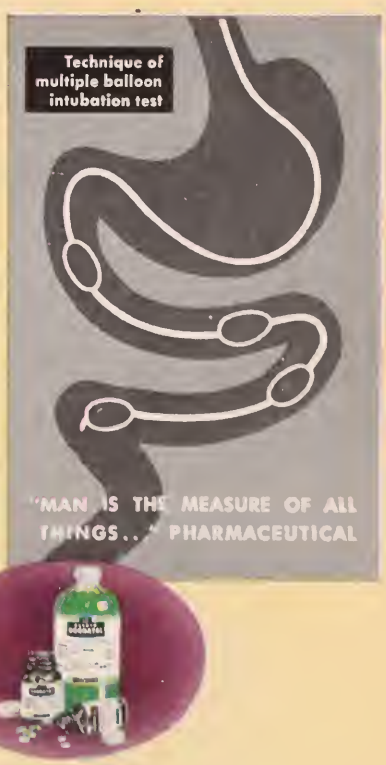


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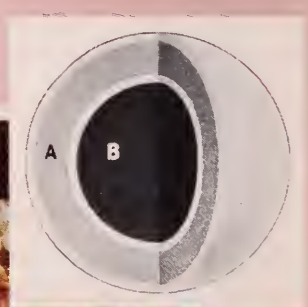
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In addition to the formerly available 1 mg. tablet, Veriloid is now also available in 2 mg. and 3 mg. tablets. Based on former prices, the 1 mg. tablet represents a saving of 16⅔%, the 2 mg. tablet a saving of 25%, and the 3 mg. tablet a saving of 33⅓%.

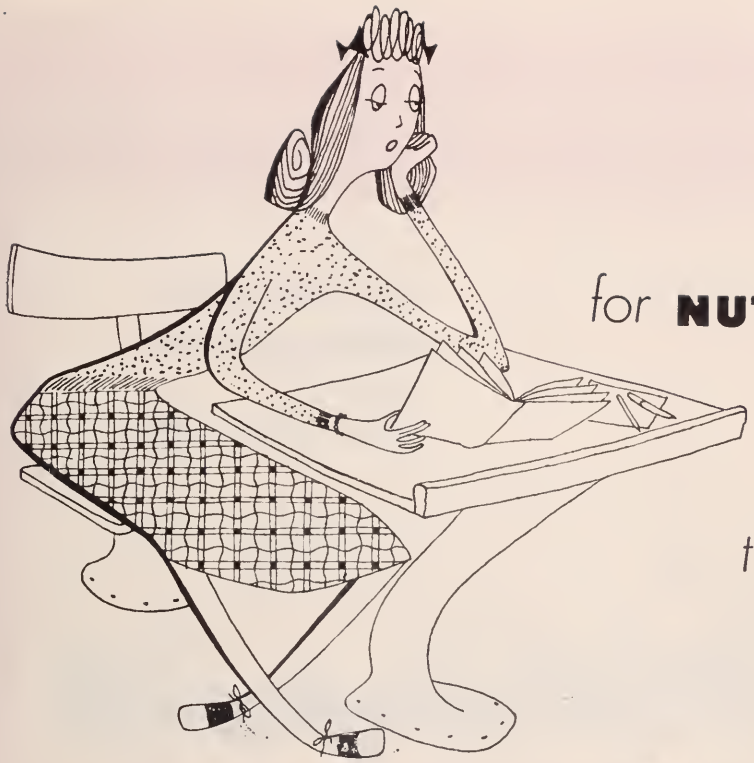
After the optimal dose has been determined for the patient, the prescribing of the largest possible tablet size will result in the greatest saving. Literature describing the action, uses, and administration of Veriloid is available on request.



Veriloid, a purified biologically standardized extract of Veratrum viride, is now supplied in 1.0 mg., 2.0 mg., and 3.0 mg. scored tablets in bottles of 100, 500, and 1000. Available on prescription only at all pharmacies.

*Trade Mark of Riker Laboratories, Inc.

RIKER LABORATORIES, INC.
8480 BEVERLY BLVD., LOS ANGELES 48, CALIF.



for **NUTRITIONAL**
iron-deficiency
anemias
there is nothing
better than

White's MOL-IRON®

with Liver and Vitamins *(including B_{12})*

Molybdenized iron (White's Mol-Iron)—the most effective iron therapy known [1, 2, 3]—combined with ALL the known as well as the unidentified nutrients of desiccated WHOLE liver, plus supplemental vitamin factors, including vitamin B_{12}.

Each capsule contains:

Mol-Iron { ferrous sulfate	195 mg.
Mol-Iron { molybdenum oxide	3 mg.
Desiccated Whole Liver	0.45 Gm.
(equivalent to 1.8 Gm. whole liver—minus water content only—not a fraction or an extract)	
Thiamine hydrochloride	1 mg.
Riboflavin	1 mg.
Vitamin B_{12}	1 μg.
Nicotinamide	5 mg.
Pyridoxine hydrochloride	0.5 mg.
Calcium Pantothenate	1 mg.

Recommended dosage: 1 to 2 capsules three times daily after meals.
Supplied in bottles of 100 and 1000 capsules.

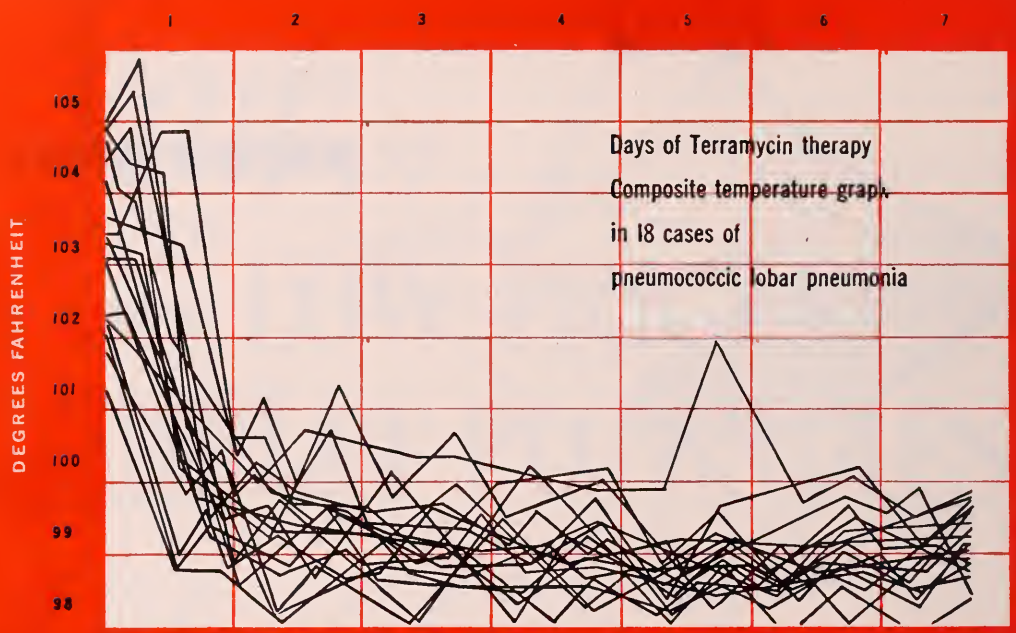
Also available:

Mol-Iron Tablets, small, easily swallowed.
Mol-Iron Liquid, extremely palatable, particularly suited to children's tastes.
Mol-Iron with Calcium and Vitamin D, for the pregnant or lactating patient.

WHITE LABORATORIES, INC., Pharmaceutical Manufacturers, Newark 7, N. J.

1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. *57*:541 (1949).
2. Chesley, R. R., and Annitto, J. E.: Bull. Margaret Hague Mat. Hosp. *1*:68 (1948).
3. Healy, J. C.: The Jnl. Lancet *66*:218 (July) 1946.

PNEUMOCOCCIC LOBAR PNEUMONIA



CRYSTALLINE

Terra

"With the exception of one subject... there was a dramatic fall in the temperature within twenty-four to thirty-six hours after the first dose of terramycin was given. The major decline in fever occurred during the first twenty-four hours after institution of therapy."

"Improvement in the acute symptoms... usually coincided with the fall in temperature. In many instances... symptomatic improvement actually preceded the fall in temperature."

Melcher, G. W.; Gibson, C. D.; Rose, H. M., and Kneeland, Y.: J. A. M. A. 143:1303 (Aug. 12) 1950.

Antibiotic Division **Pfizer**

"Excellent" and "dramatic" response

"The response to terramycin therapy was considered excellent in every case and there were no cases in which treatment failed."

Melcher, G. W.; Gibson, C. D.; Rose, H. M., and Kneeland, Y.: J. A. M. A. 143:1303 (Aug. 12) 1950.

Dosage: On the basis of findings obtained in over 150 leading medical research centers, 2 Gm. daily by mouth in divided doses q. 6 h. is suggested for most acute infections.

Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.

mycin

HYDROCHLORIDE

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Terramycin may be highly effective even when other antibiotics fail.[1]

Terramycin may be well tolerated even when other antibiotics are not.[2]

1. *Blake, G. F.; Erica, G. H., and Wagner, K. R.: Yale J. Biol. and Med. 22:494 (July) 1950.*
2. *Herrell, W. E.; Heilman, F. R.; Wellman, W. E., and Bartholomew, L. A.: Proc. Staff Meet. Mayo Clin. 25:183 (Apr. 12) 1950.*

CHAS. PFIZER & CO., INC. *Brooklyn 6, N. Y.*





calcium

phosphorus

potassium

iron

a new product

the Ca:P ratio is the key

A uniformly high calcium-phosphorus ratio . . . adjusted in BREMIL to a guaranteed minimum of 1½ parts calcium to 1 part phosphorus . . . this is the nutritional key to the prevention of hypertonicity, hyperirritability, and other tetanic symptoms in infants.

Gardner, Butler, et al., state: "Relative to human milk, cow's milk has a low Ca:P ratio . . ."[1] Nesbit writes: "Tetany of the newborn is now recognized as a definite entity . . . and often accompanied by an increased phosphorus and lowered blood calcium."[2] Dodd comments that "hypocalcemia tetany in the newborn may be of serious consequence."[3]

BREMIL . . . newest product of Borden research . . . is a completely modified milk in which nutritionally essential elements of cow's milk have been adjusted in order to supply the nutritional requirements of infants deprived of human milk. BREMIL is therefore a human milk replacement to which physicians can turn with confidence for uninterrupted good results.

human milk	Bremil (reconstituted)	
0.034%	0.078%	
315 mg.	768 mg.	per qt.
.015%	.052%	
128 mg.	512 mg.	per qt.
.041%	.078%	
480 mg.	750 mg.	per qt.
.00018%	.00082%	
5 mg.	8 mg.	per qt.

But an adjusted Ca:P ratio is not the only attribute that makes Bremil new and unique

BREMIL has the fatty acid and amino acid patterns of human milk . . . the same carbohydrate (lactose) . . . vitamin adjustments to meet the recommended standards of infant nutrition[4] . . . a soft, flocculent curd of small particle size comparable to human milk . . . complete solubility.

Just as with human milk you can start the infant on BREMIL the day it is born. Standard dilution is 1 level tablespoonful and 2 fl. oz. water, although BREMIL can be either concentrated or diluted. Each level tablespoonful BREMIL powder supplies 44 calories. BREMIL is easy to prepare and can be mixed for a single feeding or a 24-hour period.

Complete information and a trial supply may be obtained upon request. BREMIL is available in drugstores in 1 lb. cans.

1. Gardner, L. I., Butler, A. M., et al.: *Pediatrics* 5:228, 1950.
2. Nesbit, H. T.: *Texas State J. M.* 38:551, 1943.
3. Dodd, K., and Rapoport, S.: *Am. J. Dis. Children* 78:537, 1949.
4. Recommended Daily Dietary Allowances, Revised 1948, Food and Nutrition Board, National Research Council.

flexible, palatable, easy to prepare **Bremil** *powdered infant food*

Prescription Products Division

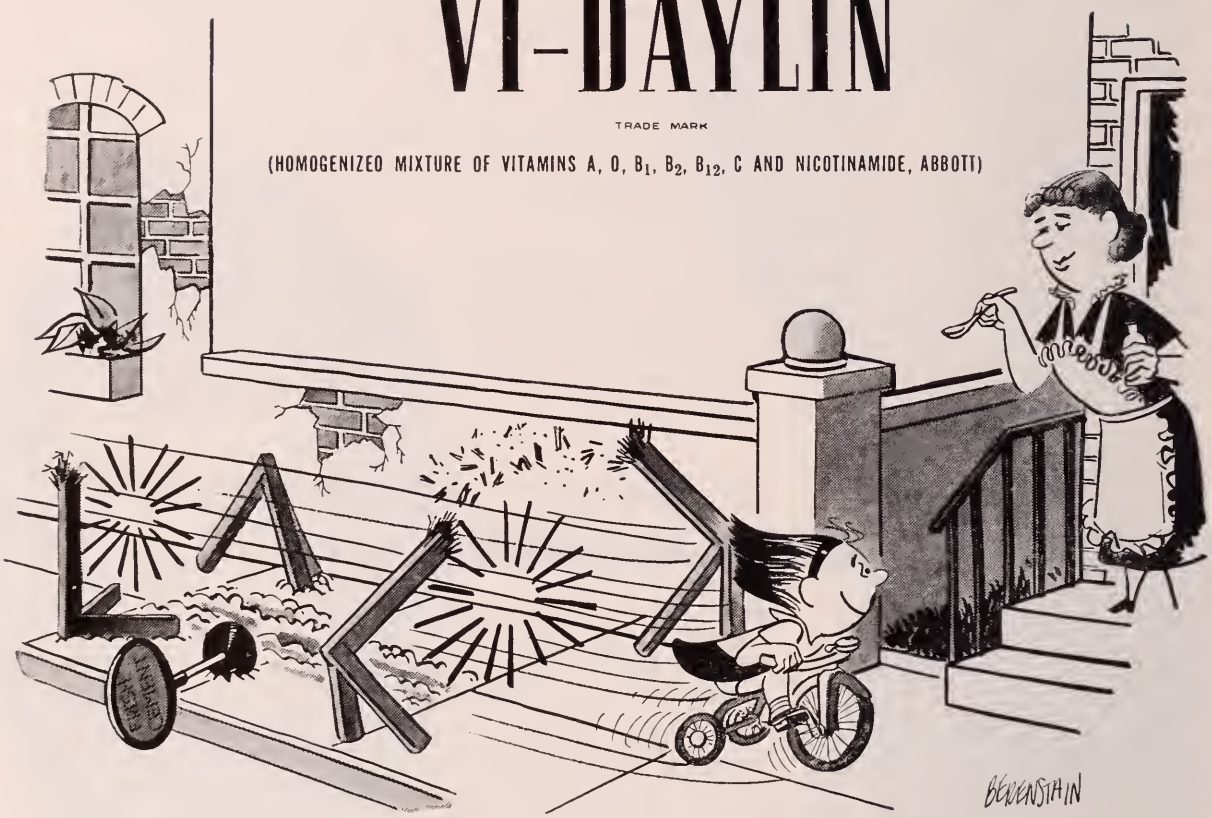
The **Borden** Company, *350 Madison Avenue, New York 17*

she's heard the call for

VI-DAYLIN

TRADE MARK

(HOMOGENIZED MIXTURE OF VITAMINS A, D, B_1, B_2, B_{12}, C AND NICOTINAMIDE, ABBOTT)



EACH 5-CC. TEASPOONFUL OF VI-DAYLIN CONTAINS:

Vitamin A	3000 U. S. P. units
Vitamin D	800 U. S. P. units
Thiamine Hydrochloride	1.5 mg.
Riboflavin	1.2 mg.
Ascorbic Acid	40 mg.
Vitamin B_{12}	1 mcg.
Nicotinamide	10 mg.

You can cement vitamin-time relations between mother and child by prescribing VI-DAYLIN, a liquid multivitamin treat as eye-appealing as yellow honey, as taste-tempting as lemon candy. Children like it right out of the spoon—no coaxing here. Sound therapy, too, for VI-DAYLIN now supplies *seven* important vitamins, including vitamin B_{12}. Note the formula at left. And VI-DAYLIN is stable at room temperature, doesn't require valuable refrigerator space. Mixes with milk, fruit juice, cereal for infants. No fishy odor, no resistant stains on clothing. At all pharmacies in three sizes: 90-cc., 8-fluidounce and 1-pint bottles.

Abbott

MRT

sulfa dispersions

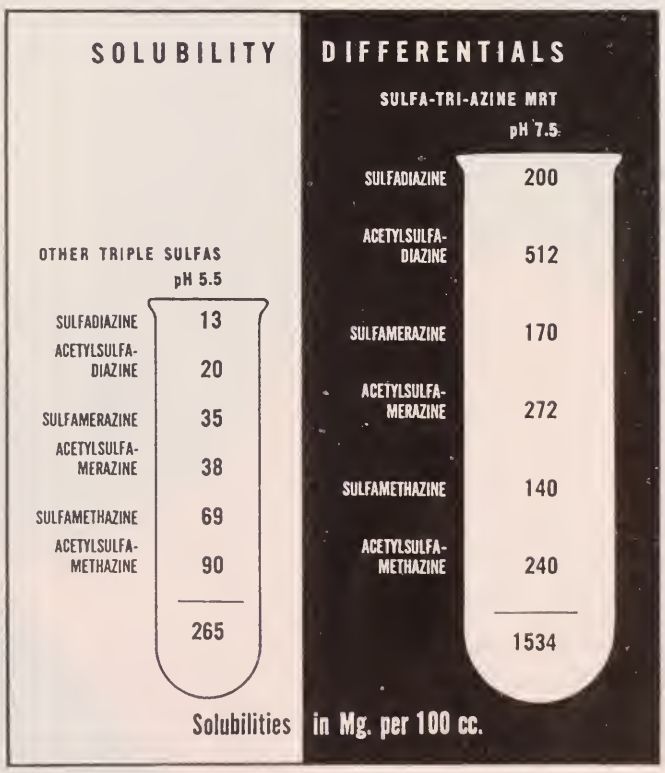
safe

palatable

self-alkalinizing

effectiveness with complete safety

These MRT sulfonamide products are superior because of their high solubility and self-alkalinizing potentials. There is no crystalluria with doses that are much higher than would be used for therapeutic purposes. In addition there is no need for concomitant alkali medication.



SULFA-tri-AZINE
with SODIUM LACTATE MRT

Each teaspoonful (5cc) contains:
0.166 Gm. Sulfadiazine
0.166 Gm. Sulfamerazine
0.166 Gm. Sulfamethazine } Equivalent to 0.5 Gm. of total Sulfonamides
1.500 Gm. Sodium Lactate
Available: Bottles 16 oz.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

SULFADIAZINE
with SODIUM LACTATE MRT

Each teaspoonful (5cc) contains:
0.5 Gm. Sulfadiazine
1.5 Gm. Sodium Lactate
Available 16 oz. bottles

MRT *marvin r. thompson, inc.*
service to medicine • stamford, conn.

broadly



Literature and directions for administration of ACTHAR, including contraindications, available on request.

ACTHAR is supplied in 10, 15, 25, 40 and 50 mg. vials, in packages of 10 vials.

FUNDAMENTAL

Basic disease manifestations are counteracted and controlled by adrenal corticoids, released and produced in their entirety under stimulation by ACTHAR, the physiologic stimulus of the adrenal cortex. Five fundamental functions of adrenal cortical stimulation appear discernible:

1. **Inhibition of the acute inflammatory process in the body tissues.**
2. **Inhibition of fever—from almost any source.**
3. **Inhibition of pain—from almost any etiology.**
4. **Inhibition of adverse cellular response to a host of toxic agents, whether of allergenic or bacterial origin.**
5. **Inhibition of excessive proliferation of fibroblasts.**

ACTHAR, through its physiologic mode of action, mobilizes and potentiates vital endogenous defense powers of the organism.

ESTABLISHED INDICATIONS: Collagen diseases or connective tissue diseases, such as rheumatoid arthritis, rheumatic fever, acute lupus erythematosus; hypersensitivities, such as severe asthma, drug sensitivities, contact dermatitis; most acute inflammatory diseases of the eye; acute inflammatory conditions of the skin, such as acute pemphigus and exfoliative dermatitis; inflammatory conditions of the intestinal mucosa, such as ulcerative colitis; and metabolic diseases, such as acute gouty arthritis and secondary adrenal cortical hypofunction.

ACTHAR

ARMOUR LABORATORIES BRAND OF ADRENOCORTICOTROPIC HORMONE (A.C.T.H.)

THE ARMOUR LABORATORIES
CHICAGO 11, ILLINOIS

PHYSIOLOGIC THERAPEUTICS THROUGH RESEARCH



welcome relief in head colds and sinusitis

We are sure you will agree that your head-cold and sinusitis patients will appreciate the prompt symptomatic relief provided by Benzedrex Inhaler.

By recommending Benzedrex Inhaler, you can keep them comfortable between office treatments. Benzedrex Inhaler provides rapid and prolonged relief from nasal congestion. Yet it does not produce ephedrine-like effects such as insomnia, restlessness and nervousness.

Your head-cold and sinusitis susceptible patients will be grateful to you for recommending Benzedrex Inhaler.

Smith, Kline & French Laboratories, Philadelphia

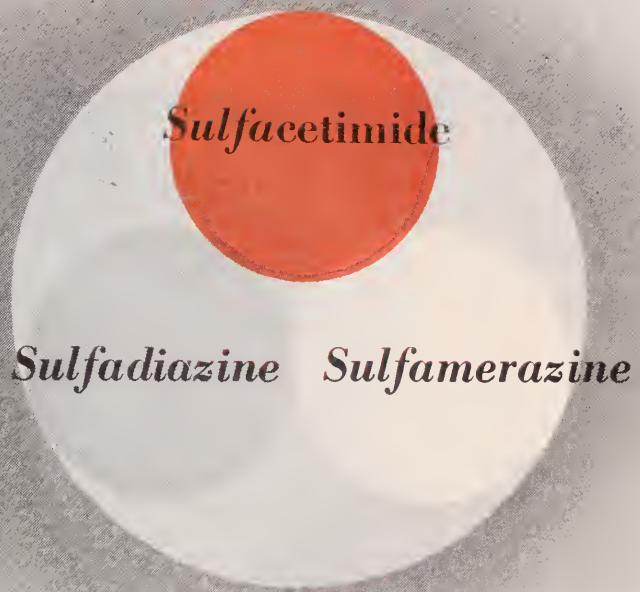
Benzedrex Inhaler

the best inhaler ever developed

'Benzedrex' T.M. Reg. U.S. Pat. Off.

Sulfonamide Mixture Therapy At Its Best

TRICOMBISUL



For greater clinical safety plus the advantages of more rapid absorption, better tissue distribution and faster therapeutic effect.

TRICOMBISUL Tablets, 0.5 Gm. total sulfonamides, each tablet containing 0.166 Gm. of sulfa*cetimide,* sulfadiazine and sulfamerazine.

TRICOMBISUL Liquid, 0.5 Gm. total sulfonamides (0.166 Gm. each of sulfa*cetimide* [solubilized], sulfadiazine and sulfamerazine) per teaspoonful (4 cc.).

*T.M.

Schering CORPORATION · BLOOMFIELD, NEW JERSEY

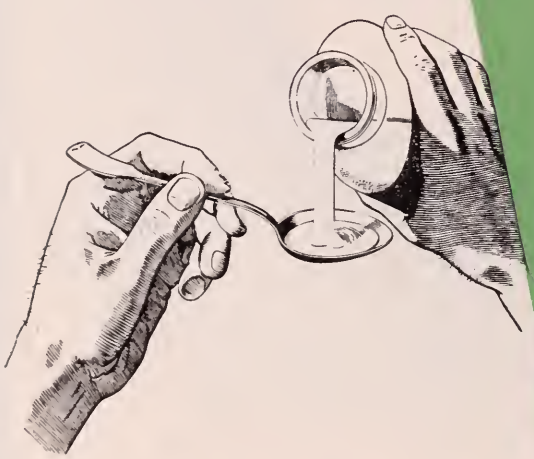
TRICOMBISUL

SCHERING

Introducing

LUBRICOID ACTION *without oil*

IN CONSTIPATION MANAGEMENT



—presents methylcellulose as a gel, with magnesium hydroxide in less than laxative dosage to maintain hydration of the gel by osmosis.

Each tablespoonful contains:

METHYLCELLULOSE	0.3 GM.
MAGNESIUM HYDROXIDE	0.6 GM.

The Turicum formula assures:

- lubricous bulk to encourage normal evacuation
- good distribution throughout the bowel
- no bloating
- no danger of impaction
- no interference with utilization of oil-soluble vitamins
- no danger of lipid pneumonia
- no leakage

TURICUM IS AVAILABLE IN ONE PINT BOTTLES

TURICUM

TRADE MARK

HYDROPHILIC LUBRICOID

Whittier LABORATORIES

DIVISION NUTRITION RESEARCH LABORATORIES, INC. • CHICAGO 11, ILLINOIS

"...the only drug we have seen that allays anxiety without clouding consciousness"

J.A.M.A. *140*:672 (June 25) 1949



Tolserol *(Squibb Mephenesin)*

- to alleviate pronounced anxiety and tension
- as an adjunct in the treatment of chronic alcoholics

DOSAGE

In anxiety tension states:

As little as 0.5 Gm., given orally every few hours, has produced a good response. However, for optimum effect, 0.75 Gm. or more is given several times a day.

As an adjunct in the treatment of chronic alcoholics:

As much as 3 Gm. orally every four hours has been found useful in the acute stage. This dosage is reduced when the patient becomes more manageable. (If Tolserol is given too soon after the patient drank alcohol, the toxic effect of the alcohol may be potentiated. For this reason, Tolserol should not be administered until six hours have elapsed since the patient drank alcohol.)

Tablets, 0.5 Gm., 0.25 Gm.; *Capsules*, 0.25 Gm.;
Elixir, 0.1 Gm. per cc.; *Solution*, 2% (intravenous).

Tolserol *(Squibb Mephenesin)*

SQUIBB 745 FIFTH AVENUE, NEW YORK 22, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858



The Sharp & Dohme representative will be glad to give you a supply of TYROZETS®, *the antibiotic-anesthetic troche.*

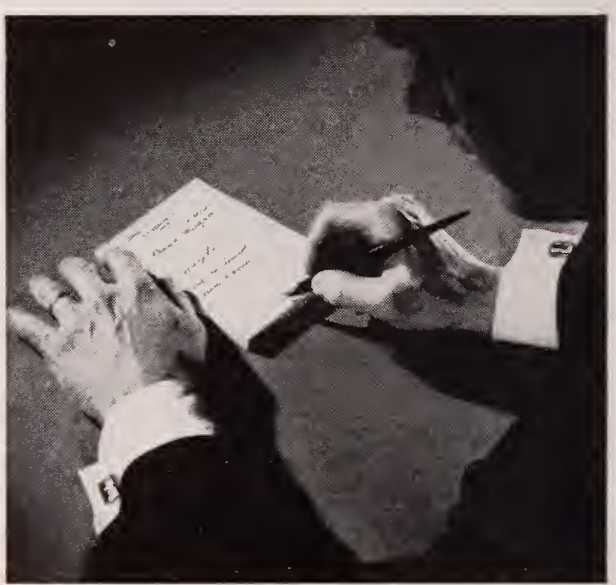
SORE THROAT:
Topical Therapy

FOR WINTER WEATHER

Potent, Antibiotic-Anesthetic Throat Lozenges

Minor throat infections are a commonplace of practice, especially during winter months. In TYROZETS, you have the first prescription troche to contain the powerful local antibiotic, *tyrothricin*, and the reliable local anesthetic, *benzocaine.*

TYROZETS usually bring quick relief of minor throat irritations, and they are exceptionally useful to control pain and infection following tonsillectomy.



TYROZETS *are available on your prescription, and are not advertised to the public.*



TYROZETS *are convenient, efficient, nontoxic local treatment for raw, sore throats; contain antibiotic* tyrothricin, *soothing* benzocaine.

Each pink TYROZETS lozenge contains 1 mg. of *tyrothricin* and 5 mg. of *benzocaine*, in a delicious, licorice-flavored base. Supplied in vials of 12 lozenges. Sharp & Dohme, Philadelphia 1, Pa.

TYROZETS®

Antibiotic-Anesthetic Throat Lozenges

Cortone®



Saline Suspension of CORTONE Acetate

(1 cc. = 25 mg.) vials, 20 cc.





Tablets— CORTONE Acetate

(25 mg. each) bottles, 40 tablets

Clinical studies have demonstrated that the therapeutic activity of Cortone* is similar whether administered parenterally or orally. Dosage requirements are approximately the same, and the two routes of administration may be used interchangeably or additively at any time during treatment.

Although the manufacture of Cortone—probably the most intricate and lengthy synthesis ever undertaken—has imposed unprecedented difficulties, every effort is being made to increase production and, in the meantime, to achieve an equitable national distribution of this vital drug.

Literature on Request

Key to a New Era in Medical Science

Cortone®

ACETATE

(CORTISONE Acetate Merck)

(11-Dehydro-17-hydroxycorticosterone-21-acetate)

Among the conditions in which Cortone has produced striking clinical improvement are:

RHEUMATOID ARTHRITIS and Related Rheumatic Diseases

ACUTE RHEUMATIC FEVER

ALLERGIC DISORDERS, including Bronchial Asthma

INFLAMMATORY EYE DISEASES

SKIN DISORDERS, notably Atopic Dermatitis, Psoriasis, Exfoliative Dermatitis, including cases secondary to drug reactions, and Pemphigus

LUPUS ERYTHEMATOSUS (Early)

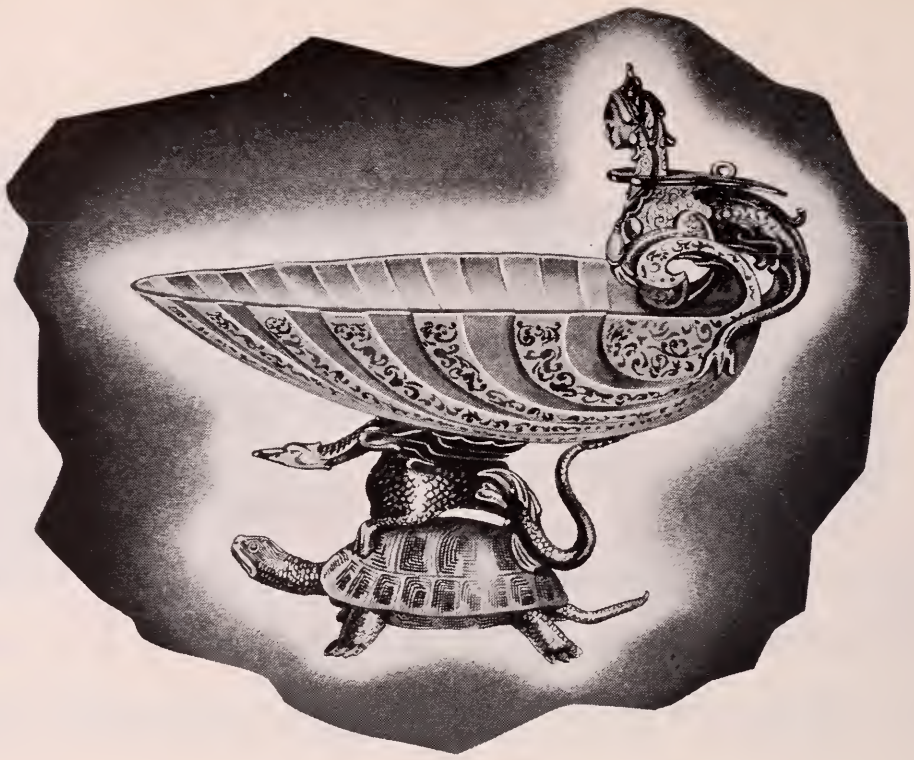
ADDISON'S DISEASE

**CORTONE is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

MERCK & CO., INC.

Manufacturing Chemists

RAHWAY, NEW JERSEY



Quality and Craftsmanship . . .



GELUSIL* *'Warner'*

Once in a long while a remedy is evolved which meets practically all of the medical requisites: effective, safe, and reliable. In the management of peptic ulcer or hyperacidic conditions, GELUSIL* 'Warner' by combining comparatively non-reactive aluminum hydroxide gel with magnesium trisilicate, provides the advantages of both.

Prompt action **Prompt relief**
Prolonged action **Prolonged relief**

without secondary acid rise, chloride depletion, or danger of alkalosis;

and, most important, there is practically no constipation.[1]

HOW AVAILABLE: GELUSIL* 'Warner,' the safe, effective and reliable antacid preparation is purely local and non-systemic in its action.

TABLETS—each containing magnesium trisilicate, 0.5 Gm (7.5 grains) and dried aluminum hydroxide gel, 0.25 Gm (4 grains): boxes of 50 and 100, and bottles of 1000 tablets.

LIQUID—magnesium trisilicate, 0.5 Gm (7.5 grains) and aluminum hydroxide, 0.25 Gm (4 grains) per 4 cc (1 teaspoonful): bottles of 6 and 12 fluidounces.

[1]Seley, S. A.: Medical Management of Pyloric Obstruction Resulting from Peptic Ulcer, *Am. J. Dig. Dis., 13*:238, 1946.

*T. M. Reg. U. S. Pat. Off.

WILLIAM R. WARNER
Division of Warner-Hudnut, Inc.
New York • Los Angeles • St. Louis

Intermediate

*Acting**

GLOBIN INSULIN

'B.W.& CO.'

**Clinical Evidence:—*

"...it was found that the characteristic activity of globin insulin and 2:1 mixture (of protamine zinc and regular) insulin is essentially the same."[1]

"Not often do either globin insulin or a 2:1 mixture require supplementary use of regular insulin. Fully 80% of all severe diabetics can be balanced satisfactorily with one of them."[2]

1. *Reeb, B. B., Rohr, J. R., and Colwell, A. R.: Proc. House Staff Dept. Med., Wesley Memorial Hospital, Chicago, Ill. Feb. 6, 1948.*

2. *Rohr, J. H., and Colwell, A. R., Proc. Amer. Diabetes Assn. 8:37, 1948.*

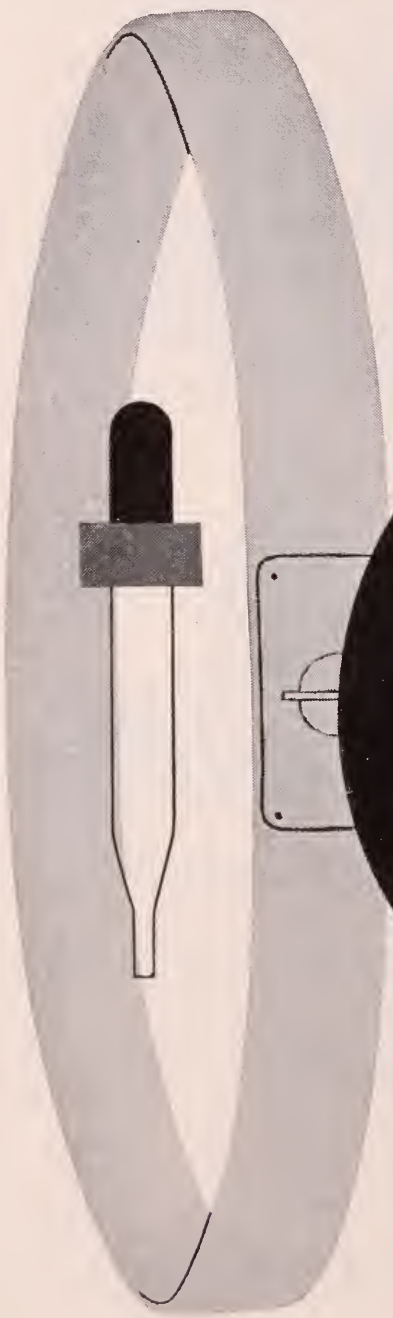
COMPLETE CLINICAL INFORMATION WILL BE SENT ON REQUEST

'Wellcome' brand Globin Insulin with Zinc, 'B. W. & Co.' ®
is supplied in vials of 10 cc., U-40 and U-80

BURROUGHS WELLCOME & CO., (U.S.A.) INC., TUCKAHOE 7, NEW YORK

"Of all the medications tried for treatment of the common cold during my thirteen years as Chief of Otolaryngology at this school*, [Par-Pen] has proved the most satisfactory."

Furlong, T.F., Jr.: Clinical Test of a New Spray, Arch. Otolaryng. 48:658.
**The Pennsylvania School for the Deaf, Philadelphia*



POTENT BACTERIOSTASIS Par-Pen provides the potent antibacterial action of 5000 units of penicillin per cc. . . . plus the vasoconstriction of 'Paredrine' Hydrobromide, 1%.

DEEP PENETRATION Penicillin in solution penetrates the tissues more readily than the sulfonamides or tyrothricin, reaching deeply embedded organisms.

Par-Pen

the penicillin-vasoconstrictor for intranasal use

Now packaged in convenient ½ fl. oz. bottles.

'Paredrine' & 'Par-Pen' T.M. Reg. U.S. Pat. Off.

Smith, Kline & French Laboratories, Philadelphia

Effective against many bacterial and rickettsial infections, as well as certain protozoal and large viral diseases

AUREOMYCIN

The insatiable demand for aureomycin throughout the world has necessitated not only a tremendous expansion of our production capacity in the United States, but the setting up of highly complex technical organizations in other countries, looking toward eventual universal distribution of this extraordinarily valuable antibiotic. The huge tanks in which the basic fermentations are carried out have a capacity of 20,000 gallons each. Rigid precautions are taken to avoid contamination by viruses (actinophages) which feed upon actinomyces, and by other microorganisms, which may necessitate the discarding of an entire batch. The efficiency of this fermentation has been increased steadily since the first introduction of aureomycin. This has been accomplished for the most part by the use of improved media and of higher-yielding mutants.

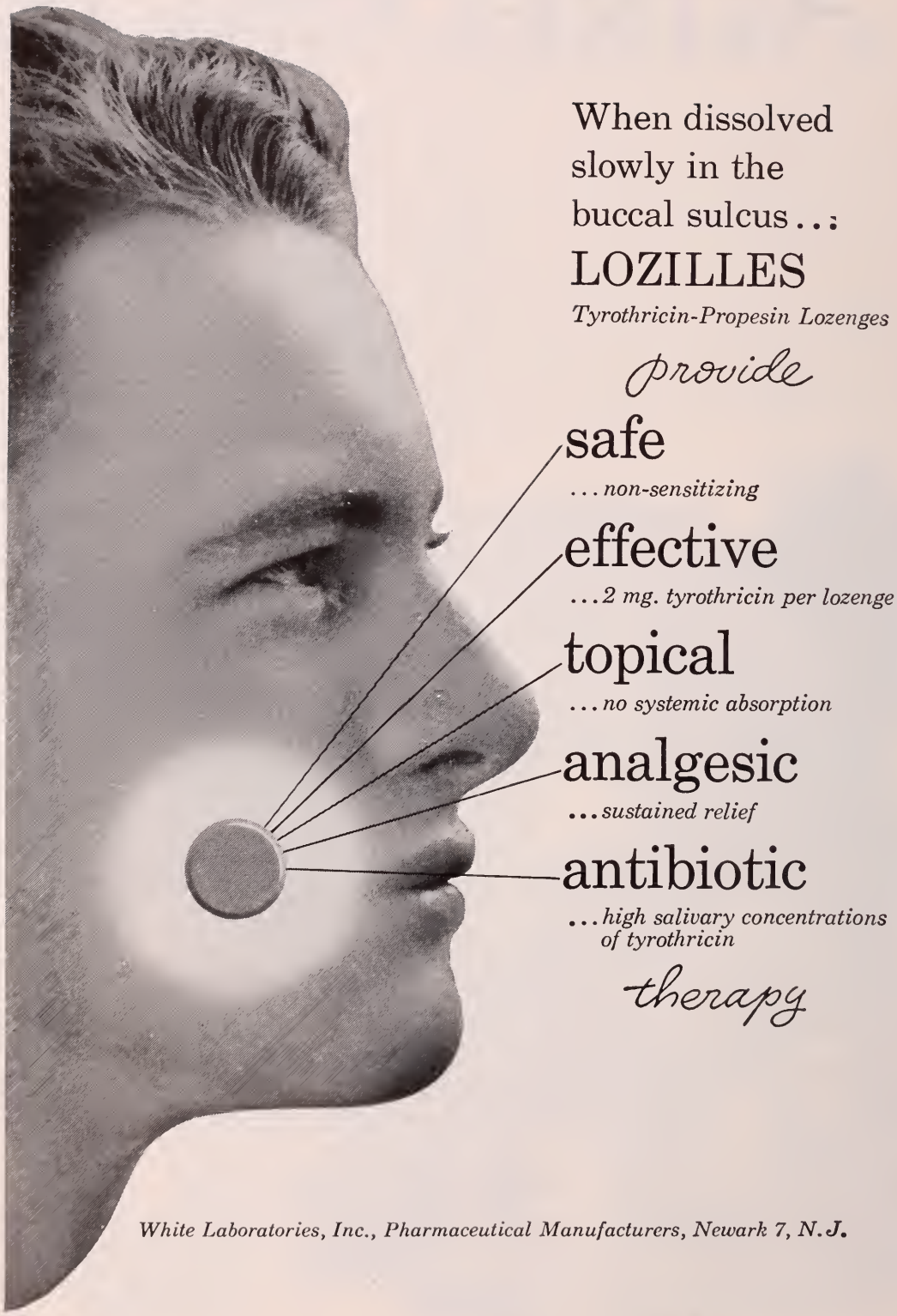
Aureomycin is now available in a number of convenient forms, for use by mouth and in the eye. New forms of this antibiotic of unsurpassed versatility are constantly being brought out.



Capsules: *Bottles of 25 and 100, 50 mg. each capsule. Bottles of 16 and 100, 250 mg. each capsule.*

Ophthalmic: *Vials of 25 mg. with dropper; solution prepared by adding 5 cc. of distilled water.*

LEDERLE LABORATORIES DIVISION *American Cyanamid Company* 30 Rockefeller Plaza, New York 20, N.Y.



White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, N.J.



When Lactation Fails

℞ LACTOGEN®

When the supply of breast milk is inadequate or when lactation fails entirely, there is no better formula than Lactogen. Designed to resemble mother's milk, it consists of whole cow's milk modified with milk fat and milk sugar. It differs, however, in one important respect: the protein content of Lactogen in normal dilution is one-third greater than that of mother's milk—2.0% instead of 1.5%.

A Complete Infant Formula In One Package

Lactogen contains all the ingredients of a well-balanced infant formula. In addition, it is fortified with iron to compensate for the deficiency of this mineral in milk.

Easily Prepared . . . Merely Add Water

Lactogen is simple to use. The prescribed amount is stirred into warm, previously boiled water. Either a single feeding can be prepared, or the entire day's quantity can be made up and stored in the refrigerator until used.

THE NESTLÉ COMPANY, INC.

COLORADO SPRINGS, COLORADO

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

NOTABLY HIGH IN PROTEIN CONTENT

Lactogen contains a generous amount of protein . . . more than enough to satisfy every protein need of the rapidly growing infant.

Raising pain's threshold is Phenaphen with Codeine's business! Its efficacy is directly attributable to the potentiating

action of these five anodyne and sedative components.

(Acetylsalicylic acid U.S.P. 2½ gr., phenacetin 3 gr., phenobarbital U.S.P. ¼ gr., and hyoscyamine sulfate .031 mg., with codeine phosphate ¼ or ½ gr.)

Phenaphen® with Codeine

is a product of **A. H. ROBINS CO., INC. • RICHMOND 20, VA.**

Ethical Pharmaceuticals of Merit since 1878

Robins

Why physicians specify ILETIN (INSULIN, LILLY) PREPARATIONS



Several reasons, we believe, prompt doctors to name Iletin (Insulin, Lilly) preparations when prescribing for their diabetic patients. One reason probably is based on recognition—the desire to support the laboratory which first made Insulin commercially available in the United States. Another is a form of encouragement—to further the developments in diabetic control to which Lilly devotes so much attention. Still another, and perhaps the best reason of all, is confidence—in the integrity of the manufacturer and in the reliability of the Lilly trade-mark.

ILETIN (INSULIN, LILLY) PREPARATIONS

Detailed information and literature on Iletin (Insulin, Lilly) preparations are personally supplied by your Lilly medical service representative or may be obtained by writing to Eli Lilly and Company, Indianapolis 6, Indiana, U.S.A.

Lilly

SINCE 1876



LILLY SINCE 1876

The birth of a trade-mark

When Colonel Eli Lilly opened his pharmaceutical laboratory in 1876, he gave his personal assurance that Lilly products would be found trustworthy. As a sign of his sincerity, he placed his own signature on every package. This enterprise progressed, partly because it had been planted in a healthy economic soil, partly because of honest hard work, but mostly because it kept faith with the promise of reliability. To this day, the signature on every Lilly container continues to be more than an ordinary trade-mark. It is an endorsement of the product, a guarantee of reliability.



Lilly

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The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

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PUBLIC RELATIONS IN ILLINOIS

The Illinois State Medical Society has been interested in medical public relations over a period of years, and during that time much has been accomplished. However, it was not until four years ago that a public relations director was selected to supervise these various activities and aid in the development of an overall program for the future.

The public relations activities in this Society were placed under the direct supervision of the Committee on Medical Service and Public Relations, a constitutional committee. Many meetings were held to discuss the problems and arrange a suitable program. Additions were made to the duties of the public relations director from time to time. The last revision of the program was put into effect nearly two years ago. It was the opinion of the Committee that the Council should receive its recommendations for an expanded program, and the report of the Chairman of the Committee, Dr. Percy E. Hopkins, was presented at the regular meeting of the Council on January 7, 1951.

The new war effort was considered. Under the guise of "critical necessity" efforts might be made to increase socialistic trends and place more burdens on the federal government. The November elections showed definitely that the American people are desirous of retaining their autonomy to the greatest extent possible. It was most heartening to note the large number of voters who went to the polls on November 7 last year.

The medical profession has always done everything possible in time of war to aid the country. This is well illustrated by the large number of physicians and members of allied professions who have left their private practices to join the medical corps of the armed forces. In the present crisis this will be done again.

In considering this proposed program of medical public relations, the keynote will be the stimulation of greater and more intensive participation by individuals and county medical societies in the overall public relations efforts of organized medicine.

The officers of the state medical society and its committees will ask each component society to devote one of its meetings during the next few months to the general subject of public relations. In the smaller counties, efforts will be made to combine several for joint meetings. These meetings will be addressed by various speakers who will outline the work of the Society and the public relations programs to develop unity of effort and singleness of purpose into our functioning. The details of the whole operation will be explained in these talks.

Two years ago the Speakers' Bureau was

created within the Public Relations structure. Although it has functioned well, it should be strengthened. Speakers should be developed in all sections of the state in addition to those already recruited, to discuss the many problems of present day medical public relations problems, and to recommend those things which individuals and component societies can do as their part in the overall program.

A public relations committee should be set up in many of the larger counties throughout the state. Many societies already have the nucleus which can be used in an expanded program. County society officers and members should begin now to plan and synchronize these meetings. They should be sure that they have members on their committees who can function to the best advantage of all concerned. A good job in public relations has been done at the national and at the state level. It is quite apparent that the county level is where more work can and should be done to further the gains which have been made during recent months.

HISTOPLASMOSIS

Histoplasmosis is an old disease which recently has undergone rejuvenation. For many years it was considered to be a rare and fatal condition, but it is known now that a mild and more prevalent form exists. Most of these cases went unrecognized; the remainder were misdiagnosed as primary tuberculosis. Oddly enough the pendulum of this disease is swinging from complete obscurity to a prevalence in certain areas that is endemic in proportion. This is true particularly of Missouri, Tennessee, Kentucky and Southern Ohio. Since some of these states border on Illinois we too must be on the alert and include histoplasmosis in the differential diagnosis of a variety of diseases.

The acute systemic form is well known to pathologists. The disease process in the lungs mimics tuberculosis in that cavitation and other localized clinical phenomena occur. The absence of the tubercle bacillus in the sputum suggests the diagnosis and if further studies are done, the histoplasma capsulatum can be demonstrated by culture. Such cases usually run a fulminating course and are fatal. But all too often the infection is more generalized. The first symptoms are those of an ulcer of the mouth, tongue or oral pharynx. This is accompanied or followed by a fever, weight loss, anemia, leukopenia, splenomegaly, hepatomegaly and occasionally, a generalized lymph adenopathy. In fact the disease should be suspected in cases of unexplained splenomegaly and hepatomegaly especially if accompanied by irregular fever, leukopenia and anemia. This clinical picture usually calls for a bone marrow puncture and aspiration; the organisms in the cells of the marrow are detected usually by direct smear or culture. There are cutaneous papular lesions which often ulcerate and leave deep punched out ulcers. Cutaneous lesions of the genitalia also may develop. Endocarditis is another possibility when the disease is generalized and now and then destructive lesions of the joints are noted. Nodules and ulcerations of the stomach and bowel, even leading to the diagnosis of ulcerative colitis have been reported.

But the acute systemic form is the exception rather than the rule. It is the small miliary lesion in the chest that probably represents the most common manifestation. The lesion has all the ear marks of tuberculosis, yet, there is a negative tuberculin reaction. It was this discovery that led Christie and Peterson[1] of the United States Public Health Service to prepare a skin test for histoplasmosis which was similar to that for tuberculosis. They found that a high percentage of those with positive chest findings and negative tuberculin tests reacted to the new histoplasmin substance. In addition, their findings were most consistent in areas where the highest incidence of fatal histoplasmosis had been reported previously. The condition has had its face lifted but in all probability it is harmless, except for the occasional case that proves fatal.

(1) Ann. Int. Med., 28:867, Apr. 1948.

MEDICAL ADVISORY COMMITTEE TEN YEARS OLD

Ten years ago at the request of the Illinois Public Aid Commission, the Illinois State Medical Society named a medical advisory committee to work with the officials of the I.P.A.C. to set up medical standards for medical care of their recipients. Realizing that these clients were people in low income groups, and the funds available would not permit payment of regular rates for services rendered, the committee



Dr. E. P. Coleman accepting certificate from Henry F. Tenney, Chairman, Illinois Public Aid Commission.

through the years, has had unusual responsibilities. It has not been possible to meet the demands of some of the physicians who work under the plan, but the fault has not been on the part of the committee, nor has it been directly due to I.P.A.C. personnel, for their budgets have not permitted payment of regular fees.

From year to year however, there has been a gradual increase in many of the rates and it is hoped in coming months further improvements will be made possible in keeping with the increase in essential commodities in general. At the meeting of the Medical Advisory Committee and the I.P.A.C. personnel held in Chicago January 6, the chairman of the Illinois Public Aid Commission, Henry F. Tenney presented a framed certificate to Everett P. Coleman, chairman of the advisory Committee. The certificate reads as follows:

TENTH ANNIVERSARY CITATION

In sincere appreciation of meritorious service and in commemoration of ten years of unselfish devotion to humanitarian objectives, the Illinois Public Aid Commission confers this tenth anniversary testimonial upon The Illinois State Medical Society's Advisory Committee To The Illinois Public Aid Commission for superb professional guidance of its medical assistance program, for helping to interpret the program to the physicians of Illinois without whose complete cooperation the program could not have flourished, and for contributing time, energy, and advice for the benefit of the ill and afflicted.

The Illinois State Medical Advisory Committee, an official committee of the Illinois State Medical Society, was organized in January 1941 to assist the State in developing a plan for providing medical care to needy mothers and children and to the indigent aged. In July 1943 it expanded its activities to include the blind and the unemployed and in 1950 its responsibilities were further increased to encompass the permanently and totally disabled. The Committee has borne its ever growing burden steadily and without complaint — modestly and without publicity — constantly and without faltering.

The Roll of Honor of those who have served includes the names of some of Illinois' most distinguished physicians. The Commission expresses its gratitude to each of them — to Drs. E. P. Coleman of Canton, Chairman; Charles P. Blair, Monmouth; Harold M. Camp, Monmouth; Harlan English, Danville; E. S. Hamilton, Kankakee, Harry M. Hedge. Chicago; Julius H. Hess, Chicago; B. E. Montgomery, Harrisburg; and T. R. Van Dellen, Chicago, who now constitute the Committee — and to Drs. Charles H. Phifer, Chicago, former Chairman; Robert S. Berghoff, Chicago; Oscar Hawkinson, Chicago; Percy E. Hopkins, Chicago; James H. Hutton, Chicago; John R. Neal (deceased), Chicago; Irving H. Neece, Decatur; Walter Stevenson, Quincy; James S. Templeton, Pinckneyville; and E. H. Weld, Rockford, who have served previously.

This Testimonial is presented by direction of the Commission pursuant to a Resolution unanimously adopted at its meeting of November 8, 1950.

For the Commission

Carl K. Schmidt Jr.,
Executive Secretary

Henry F. Tenney,
Chairman

January 1951

FORMATION OF AMERICAN MEDICAL EDUCATION FOUNDATION

The action of the Board of Trustees at the Cleveland meeting in appropriating one-half million dollars as the Association's initial contribution to an annual fund to be raised by the medical profession to assist the medical schools has been widely applauded as one of the most constructive and important programs ever undertaken by the American Medical Association. In announcing the establishment of this fund, the Board of Trustees expressed the hope that the Association's contribution would be greatly augmented by gifts from many other sources and urged all members of the Association to contribute individually. The initial response of the profession has been most gratifying. Many physicians in attendance at the Cleveland meeting inquired how they should make their contributions, and since the meeting letters requesting similar information have been received daily at Association headquarters.

It can now be announced that the American Medical Education Foundation has been established as a not-for-profit corporation, under the laws of the state of Illinois, to receive and distribute contributions to the fund from the individual members of the medical profession and friends of the profession. The Commissioner of Internal Revenue has been asked to rule that gifts to the foundation will be deductible in the computation of income taxes. An 11 man board of directors chosen from the Board of Trustees, the officers of the Association and the Council on Medical Education and Hospitals will be responsible for arranging for the distribution of the funds to all approved medical schools. The funds are to be unrestricted, with each medical school free to determine how it can best use its share to further the basic training of its students. It is planned that the foundation will coordinate its activities closely with other major efforts to raise funds for medical education from voluntary sources, which it is hoped will be announced shortly.

Each member of the medical profession is urged to demonstrate his support of this new undertaking by contributing promptly and generously. Because of rising costs, inflation, fewer large individual benefactions and reduced incomes from endowments, the medical schools need, without further delay, assistance of the type this fund can give. It is the desire of the foundation that the first annual disbursement of funds to the medical schools may be made this spring. It is clear that, if the foundation's contribution is to be an effective one, a substantial fund must be raised by the medical profession within the next few months. It is therefore urged that each physician consider an annual contribution of $100. Many of the contributions already received exceed this figure. When a physician feels that this amount is beyond his means, smaller contributions will be welcome, but the profession must recognize that substantial sums are required and that token contriubtions alone will not be sufficient.

Almost every physician now practicing received his medical education for less than what it cost his medical school. While many physicians have discharged this debt to society in full or in part, by public and charitable activities and by donations to the schools with which they have been associated, many are still indebted to one or more medical schools for their training as students, interns or residents. Furthermore, the medical profession has traditionally accepted a large measure of responsibility for the training of the continuing flow of young physicians, on which it must depend for recruits and replacements in its efforts to serve humanity. It is to be expected, therefore, that all physicians, regardless of the other contributions they may have made to society, will want to share in the responsibility of making the foundation a success.

The American Medical Association has indicated its belief that the possibilities of securing adequate support for medical education from voluntary sources are far from exhausted. To prove this, actions as well as words are required. The challenge has now been made directly to the medical profession. The members of the profession can meet this challenge by sending their contributions today to the American Medical Education Foundation, 535 North Dearborn Street, Chicago 10.—*Editorial J.A.M.A.* Jan. 20, 1951

HEALTH TALK WINS AWARD

A gold statuette, signifying first place honors in the classification "Forum and Discussion", was awarded to Health Talk, the weekly telecast produced by the Educational Committee of the Illinois State Medical Society in association with WGN-TV, February 5. The honor was the result of the second annual poll conducted by *Television Forecast*, weekly trade magazine, among its more than 160,000 subscribers. Health Talk placed fifth in a similar classification in the first poll.

Formal presentation of the award was made on the telecast, February 5, by Robert A. Kubicek, editor of Television Forecast. Harry M. Hedge, President, accepted the honor in behalf of the Illinois State Medical Society.

Health Talk, now in its third year, has achieved national recognition for its pioneer efforts, not only in the production of the program, but for establishing such firsts as the fluoroscopic image of the living heart for public viewing, a simulated operation, an actual demonstration of anesthesia in the operating room, the visual image of the human larynx, and the application of a cast.

Sharing the honors with the Illinois State Medical Society in the recent presentation are WGN-TV and members of its staff who have given time an effort to achieve expert direction and camera work.



Dr. Theodore R. Van Dellen, the moderator, has maintained a high level of pace and presentation for the twenty-six months the program has been on the air.

That a public viewing audience chose to list Health Talk first in its classification proves that people everywhere are interested in sincere health education.

FREQUENCY OF ACUTE PANCREATITIS

Acute pancreatitis most likely occurs more often than statistics show. The disease is a chemical one initially, and gallbladder disease, reflux of bile, alcoholism, and pancreatic duct obstructions are involved in its development. Most important in the diagnosis is thinking of the disease, and a high serum amylase level in confirmatory. The aim of treatment is to put the pancreas at rest. Dramatic relief is obtained from splanchnic block, and Demerol is the analgesic of choice. Blood calcium levels are of value in following therapy and for prognosis. Late complications requiring surgery should be anticipated. *Excerpt: Acute Diseases of the Pancreas, Charles D. Reece, M.D., and John B. Burrows, M.D., Houston, Tex., Tex. S.J.M., Nov* 1950.

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chairman, John R. Wolff, Co-Chairman, Edwin F. Hirsch, Carroll Birch, Hubert L. Allen, Frederick W. Slobe, Edward W. Cannady, Ford K. Hick, W. Robert Maloney, Roland R. Cross, Alfred P. Bay, Frederick T. Jung.



The Call of the Wild

During recent years, there has been a tendency, especially among young men finishing medical school, to feel that they must locate in a city in order to have an enjoyable and profitable lifetime. There is much to be gained in the way of a satisfactory life in a smaller community.

Because of the trend among young professional men, rural communities have a certain shortage of professional individuals, and this shortage may become acute during the next few years. Many rural communities have made a definite effort to attract young men into practicing in their towns. The state of Kansas has a plan on a state-wide basis and in cooperation with the University of Kansas College of Medicine. The Illinois State Medical Society in cooperation with the Illinois Agricultural Association has such a program on a much more limited basis. Some communities have a community project and offer special inducements to get a young physician to locate there. Several have been successful in this endeavor.

Now to mention some of the advantages that a young professional man will find in a small town that he will not immediately discover in a city. In the first place, it is generally understood that he will find a spirit of welcome. When he first goes into a small town, the general reaction is that the business men and the other professional men will go out of their way to aid him in obtaining office space, living quarters and equipment. It is not unusual to find that business men may extend to him sizeable amounts of credit without security. In many places, the financial institutions will also extend aid and assistance beyond their usual mode of operation. All of this points to the fact that the young man is welcomed to the community and very often he is helped a good deal in getting himself located, and his practice started.

A second and somewhat similar attitude can be described as neighborliness. When he locates in a small town, the people who live next to him immediately become his acquaintances. When he sees them outside around their homes a friendly conversation is usually established. In addition, when the new resident goes walking down the street of the business district, he is often greeted by many of the people he passes. If he is so inclined, he can spend a good deal of time, if he simply stops and gets into a conversation; and if he will spend a little time in

the barber shop and the drug store, he can very easily round out his information regarding the happenings of the community that have not been published in the local newspaper.

Generally speaking, the young professional man who starts practice in a small community will find that his income is fairly satisfactory right from the start. He will not have nearly as long a waiting period as he would if he were lost in the shuffle of a big city. This can be a great advantage.

He will find that in these days there are pretty satisfactory means of maintaining his professional knowledge at a high level as regards the new and advanced types of thinking in this kind of work. More and more these days professional men leave their home communities for various lengths of time to take refresher courses at centers of learning. The professional publications that one may use are many. Most small communities have adequate hospital facilities for the professional man to use in his practice.

There is a commendable tendency to urge men in smaller communities to make accurate observations and record them, so that over a period of years they may accumulate valuable data to present to the medical profession. Men are urged to collect scientific facts and present them to medical meetings so that these may be on record. There is also some thinking along the lines of postgraduate training to be under the direction of local practitioners rather than in large hospitals as is the custom today.

There is the doctor's family to consider. Throughout the years, people have felt that children have many advantages when they are raised in a smaller commuity. It is easier to keep pets. They have more room in which to move. They can be closer to nature. The schools generally are able to give a little more personal attention to youngsters, even though teachers sometimes must handle rather large numbers of pupils. The children have much more opportunity to participate in the extra-curricular activities which are offered by the school.

Finally, there is the relative position in the community to be considered. In many instances a professional man who has gone into a small community will find that from the start he is accepted by his neighbors as a leader in all community enterprises. He will find that any spare time he may have will be by various fraternal organizations, community projects, service clubs, churches and other projects undertaken by the townsmen. In other words, from the start, he will find he is a pretty big frog in a relatively small pond.

On the other side of the picture, there is no doubt that certain cultural opportunities are much more available to the city dweller. It is also true that the concentration of knowledge and the closer personal contacts with the leaders in his profession who are concentrated in the city does give a young man certain benefits. It is true that a certain percentage of the professional men who locate in the city will, after an initial waiting period, have a much larger income than the average man located in a smaller community. These few individuals probably will find that they become the leaders in their profession on either a regional or national basis. These opportunities are undoubtedly available for those who have the skill, desire and the fortune to make use of them.

In conclusion, it can be stated that there are many advantages in a small community which any professional man should consider before making a decision as to where he will locate to start his practice. These opportunities have not been adequately presented to the neophytes during the past decade or two. More communities and more individuals should attempt to educate their young people to the attractions which they can find in their old home town.—W. R. M.

WILLS FOR PHYSICIANS

Hon. William F. Waugh
Judge of the Probate Court of Cook County, Ill.

Probate Judge William F. Waugh was invited to write this article because he is recognized as one of the nation's outstanding authorities on the subject. He presides over "the world's busiest court," so characterized because it deals with a larger volume of legal business than any other court presided over by a single judge. This vast legal traffic is concerned principally with administration of estates whether or not a will has been made.—Ed.

There is a widespread superstitution which deters many persons from practical consideration of the question "What will be done with my

property after my death?" The superstition seems to be that making a will is an invitation to fate to strike one down. It is difficult to believe that physicians, whose professional duties require a sensible attitude and intelligent philosophy on the ever present matter of life and death, could be among the superstitious. Whatever the reason, the evidence indicates that physicians are certainly among the many who fail to make necessary provisions for distribution of their hard-earned possessions when the inevitable occurs.

Indeed, physicians were counted "present" when a recent survey disclosed that 60 per cent of the decedents whose estates were probated in the Probate Court of Cook County in the last 20 years failed to leave wills. The result was that the estates of all these persons—money and property which they had accummulated in a lifetime of effort—descended to and were arbitrarily distributed among their heirs at law in accordance with the statutes of the state of Illinois.

In many instances that distribution was contrary to the wishes of the decedent, worked a hardship on the members of his immediate family, entailed unnecessary expense and provided windfalls for relatives who had contributed nothing toward its accumulation and who may have been wholly unknown to the decedent. The harsh and often inequitable disposition of one's assets at death may be avoided by the simple expedient of making a will.

Just as society makes the laws which provide rules of conduct in daily life, so, too, society has devised the method by which one can dispose of one's worldly goods. It is only logical that the laws—statutes in the various states—recognize that "blood is thicker than water." Frequently a person, for any number of human reasons, wishes to bestow on someone unrelated by blood a good part, a small part or all of his wealth. But the law cannot know the reasons or even the desire to do so. Only the fact of blood kinship can be considered when it is left to the law to make a distribution.

What must be clearly kept in mind, therefore, is that making any disposition of property other than by the law of descent is a privilege which must be acted on. The instrument by which this may be done, and which is recognized by the law, is the will, or "testament." The law describes how a will must be executed and requires strict compliance. Hence a will is a written instrument by which one makes a disposition of property to take effect after death, within the limits fixed by the statutes of the several states. The testator (maker of the will) may dispose of his property by will to whom he pleases, limited only by the rights given by law to a surviving husband or wife. He may disinherit any or all of his blood relatives, even his children, no matter how unjust his exclusion of his heirs may be, and he may give his property to a stranger to his blood.

Anyone who has attained his or her majority and who is of sound mind and memory may make a valid will. The will must be in writing and executed in accordance with the requirements of the state law. It may be changed from time to time by the testator through the making of a codicil or an entirely new will. A codicil is an addition, or supplement, and is usually amendatory or explanatory of the original document. It is a part of the will and must be executed with the same formality as a will. The use of the codicil often results in contradiction and confusion. Consequently, when changes are desired the execution of a new will is recommended. (Other pertinent definitions: An executor is the person who is named by the testator to execute the provisions of his will. An administrator is the person named by the court to administer a decedent's estate when there is no will.)

Making a will requires more than merely writing out intentions, if one really wants to have one's wishes carried out. Its language must be clear and unambiguous, and it must be executed in accordance with the law. In preparing and executing it one should have the assistance of a competent lawyer, and this is certainly one instance where, I believe any physician would agree, "an ounce of prevention is worth a pound of cure." Many a physician who is aware of the hazards in a layman's self diagnosis fails to recognize the analogous pitfalls in his acting as his own lawyer. In the field of law he is no longer a professional, he is a layman.

A will should be well planned, clearly written, revised from time to time to keep it up to date, and placed where it can be found when needed. I would suggest the following procedure as a well ordered course:

Prepare a memorandum containing a list of your assets, including all assets associated with your medical practice, how you desire to dispose of them and a list of your nearest relatives, together with their last known addresses (they have to be notified when your will is presented for probate even though they take nothing under it). Then see a lawyer, present the memorandum to him and tell him what you want to accomplish. He will bring to your attention the necessity of naming an executor (in Illinois, he must be a resident of the state). He will also point out the desirability of requiring a surety bond as a protection against avoidable loss, unless the surviving husband or wife or some other equally trustworthy person is to be named. In such cases it is customary to provide that he or she be authorized to act on the filing of a personal bond with surety waived. The lawyer may point out the advantages of naming a bank or trust company as executor, since the experience and judgment of their trust officers, coupled with the fact that they are impartial and will deal objectively with any situation that may arise, recommend their appointment. He will also inquire as to what provision, if any, you have made for the payment of federal estate and state inheritance taxes, which may be assessed.

At this point it is well to know that in these days of high taxes and involved tax laws the preparation of a will by an expert may result in substantial savings in taxes, leaving more of the estate to be distributed. An example of possible saving in taxes is provided by the marital deduction provision in the Revenue Act of 1948. The requirements for qualifying a bequest to a spouse as a marital deduction are technical and require the help of an expert.

When the will is drawn, provision should be made to meet payment of federal estate and state inheritance taxes. There are many tragic instances in which failure to plan necessitated sale of assets at a sacrifice for the satisfaction of tax claims. Remember, too, that your will can become out of date unless it is revised from time to time. Personal relations change, children are born and sometimes beneficiaries named in your will die before you do.

Finally, make certain that the will is kept in a place where it may be quickly brought forward when it is needed. Leaving it with the lawyer or bank or trust company is recommended, or it may be placed in a safe deposit box. In any event keep it in the place where you have your insurance policies, title papers and other valuable documents, and let someone you trust know of its existence and whereabouts.

It is apparent that the making of a will involves a careful planning of affairs and is not merely making a disposition of assets effective after death. A man and wife approaching the making of a will with proper planning gain a whole new conception of their affairs and take steps that are to their advantage during their own lifetime, such as placing the family bank account and title to the home in their joint names, in addition to providing safeguards and benefits for their prospective survivors.

When death occurs and a will has been properly made, the survivor or survivors are then obliged to have the will recognized by the law and its provisions carried out. The widow, or someone acting for her, should immediately contact the family lawyer, turn the will over to him and be guided by his advice.

Everyone should make a will. When a man dies without having made a will, the law makes one for him. The following case, I think, indicates plainly some additional advantages of making a will.

A man has an estate of $50,000. He has a wife and two minor children. His will states that he wishes all his property to go to his wife, and that he is making no provision for the children because he is fully confident that she will provide care and education for the children from the money he is leaving. He names her as executrix and stipulates that she act on her personal bond without surety. When the lawyer presents the will to the court, the administration of that estate is relatively expeditious and inexpensive.

In a similar case, but one in which the man does not leave a will, the law decides the manner of distribution. In Illinois, one-third of the estate after expenses and debts are paid goes to the widow; the remaining two-thirds go in equal parts to the children. Immediately, the law sets up a variety of safeguards. The widow is entitled to be named as administratrix, but she must provide bond with surety. This usually means a surety company bond, for which a premium is paid. Next, an estate must be

opened for the minors and a guardian appointed. The widow may be appointed guardian of her own children, but again she must provide a surety bond and pay a premium. In addition, the children's share must be deposited in the minor's estate; it cannot be used except for the care of the minors and may be withdrawn only on approval of the court. This means that every time a withdrawal is to be made and the money is to be used by the widow petitions must be filed and presented to the court, entailing the employment of an attorney and involving various court charges. It can easily be seen that failure to make a will in the circumstances set forth above involves the widow in burdensome legal duties together with extra expenses.

It is perfectly proper for a man to set up any number of controls within the limitations of the law for his children or for strangers or for anyone else he wishes to share in his estate. That is entirely his business, but he must make it his business, through execution of a will clearly setting forth his desires. It should be noted that when a person dies without leaving a will and without any heirs, the entire estate by operation of law goes to the community; in Illinois it goes to the county in which he has resided.

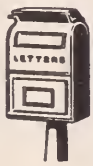
More than 30 per cent of all wills are drawn during the year prior to death. This means that a great many wills are drawn in haste or at time of unusual mental or physical stress or illness. These and the ones in which the makers lacked testamentary capacity, or have been subjected to undue influence, art the wills that are constantly being broken or which lay the foundation for long drawn-out and expensive legal battles. Certainly making a will should be the careful and considered act of every man and woman who respects human and economic values. It should be undertaken when a person is in good health and of sound mind, when he is motivated by the wish to implement the right of personal judgment, reflecting the love he bears for those closest to him. *J.A.M.A., Nov.* 4. 1950.

THE HEART IN HYPERTHYROIDISM

The heart in hyperthyroidism can be compared with the normal heart during fairly strenuous exertion. In response to an increased demand for oxygen by all tissues, including those of the heart itself, the heart rate is accelerated, the cardiac output is increased, the circulation time is shortened and venous return to the right side of the heart is increased.

The tachycardia of hyperthyroidism is characteristically constant and is present even during sleep. This is in marked contrast to nervous tachycardia, which varies greatly under different circumstances. Auricular fibrillation is a frequent occurrence in hyperthyroidism. . . . Systolic murmurs, especially of the pulmonic valve, are common. The systolic blood pressure tends to be elevated and the diastolic blood pressure tends to be lowered; this wide range of pulse pressure often produces the peripheral circulatory phenomenon seen in aortic regurgitation, namely, a water-hammer type of pulse with or without capillary pulsation, and pistol-shot sounds over the larger peripheral arteries. Bruits may be heard over the thyroid gland itself. Congestive heart failure of varying degree may be present. *Excerpt: Some Aspects of Thyroid Disease II. Cardiovascular Signs of Thyroid Disease, Thomas J. Dry, M.D., Rochester, Minn., Tex. S.J.M., Nov.* 1950.

CORRESPONDENCE



YOU ARE INVITED!

The Chicago Medical Society as a scientific organization has always been interested in seeing that the public is given the best possible medical care. Its Annual Clinical Conference is outstanding in its endeavor to be helpful not only to the specialist but also to the general practitioner. The 1951 Conference will be held on March 6-7-8-9 at the Palmer House, Chicago.

The Chicago Medical Society cordially invites the physicians of Illinois to attend. The registration fee is $5.00.

PROGRAM

TUESDAY, MARCH 6

8:30 a.m. "Hematology." Dr. Leon O. Jacobson, Assistant Professor of Medicine, Associate Dean, Division of Biological Science, University of Chicago, Chicago, Ill.

9:00 a.m. "Vasodilator Drugs in Peripheral Vascular Disease." Dr. Daniel C. Elkin, Whitehead Professor of Surgery, Emory University School of Medicine, Emory University, Ga.

9:30 a.m. "The Evaluation of Laboratory Tests." Dr. Seward E. Miller, Regional Director, Federal Security Agency, U.S. Public Health Service, Chicago, Ill.

11:00 a.m. "Diseases of the Prostate in Older Individuals." Dr. Robert A. Moore, Edward Mallinckrodt Professor of Pathology and Dean, Washington University School of Medicine, St. Louis, Mo.

11:30 a.m. "Head Injuries." Dr. Harold C. Voris, Professor of Neurosurgery, Stritch School of Medicine, Loyola University, Chicago, Ill.

1:30 p.m. "Immunological Considerations in Tuberculosis, with Special Reference to Vaccination." Dr. Esmond R. Long, Director, The Henry Phipps Institute, University of Pennsylvania, Philadelphia, Pa.

2:00 p.m. "Headaches, Causes and Treatment." Dr. Russell N. DeJong, Professor of Neurology, University of Michigan, Ann Arbor, Mich.

2:30 p.m. "Cancer of the Urinary Bladder, and Evaluation of Present Methods of Treatment." Dr. William W. Scott, Brady Urological Institute, The Johns Hopkins Hospital, Baltimore, Md.

4:00 p.m. "Diagnosis and Treatment of Carcinoma of the Cervix." Dr. H. Dabney Kerr, Head of the Department of Radiology, University Hospitals, and Professor of Radiology, State University of Iowa, Iowa City, Ia.

4:30 - 5:30 p.m. Clinicopathologic Conference

WEDNESDAY, MARCH 7

8:30 a.m. "Foreign Bodies and Chemical Burns of the Eye." Dr. William F. Hughes, Jr., Professor of Ophthalmology and Head of the Department, University of Illinois College of Medicine, Chicago, Ill.

9:00 a.m. "Hormones of the Anterior Hypophysis." Dr. Herbert M. Evans, Director, Institute of Experimental Biology, University of California, Berkeley, Calif.

9:30 a.m. "Simplified Obstetric and Gynecologic Care." Dr. William F. Mengert, Professor and Chairman of the Department of Obstetrics and Gynecology, Southwestern Medical School of the University of Texas, Dallas, Tex.

11:00 a.m. "Epidemiology of Poliomyelitis." Dr. Albert B. Sabin, Professor of Research Pediatrics, University of Cincinnati College of Medicine and the Children's Hospital Research Foundation, Cincinnati, Ohio.

11:30 a.m. "Operative Treatment of Hirschsprung's Disease." (A motion picture) Dr. Orvar Swenson, Surgeon-in-Chief, The Boston Floating Hospital, Associate Professor of Surgery, Tufts College Medical School, and Sr. Surgeon, New England Center Hospital, Boston, Mass.

1:30 p.m. "Diagnosis and Treatment of Meningitis." Dr. Adolph L. Sahs, Professor and Head, Department of Neurology, State University of Iowa, Iowa City, Ia.

2:00 p.m. "Postlumbar Puncture Headache, Its Prophylaxis and Treatment." Dr. Robert D. Dripps, Professor of Anesthesiology, University of Pennsylvania School of Medicine and Graduate School of Medicine, Philadelphia, Pa.

2:30 p.m. "Management of Lesions of the Colon." Dr. Robert L. Sanders, Associate Professor of Surgery, University of Tennessee, Memphis, Tenn.

4:00 p.m. "Dermatologic Problems in Children." Dr. Francis W. Lynch, Clinical Professor, Division of Dermatology, University of Minnesota, St. Paul, Minn.

4:30 p.m. - 5:30 p.m. Panel Discussion "What's New in Medicine and Surgery."

THURSDAY, MARCH 8

8:30 a.m. "Diabetes." Dr. Robert W. Keeton, Professor of Medicine and Head of the Department of Internal Medicine, University of Illinois College of Medicine, Chicago, Ill.

9:00 a.m. "Ectopic Pregnancy." Dr. Conrad G. Collins, Professor and Chairman, Department of Obstetrics & Gynecology, Tulane University School of Medicine, New Orleans, La.

9:30 a.m. "X-Ray Examination of the Colon — A Badly Neglected Procedure." Dr. Fred J. Hodges, Chairman Department of Roentgenology, University Hospital, Professor of Roentgenology, University of Michigan, Ann Arbor, Mich.

11:00 a.m. "The Use of Cortisone in Rheumatic Diseases." Dr. Emmerson Ward, Mayo Clinic, Rochester, Minn.

11:30 a.m. "Fractures of the Elbow in Children." Dr. William T. Green, Clinical Professor of Orthopedics, Harvard Medical School, Boston, Mass.

1:30 p.m. "Common Errors in the Diagnosis of Hydro-Nephrosis." Dr. Reed M. Nesbit, Head, General Urology Section, University of Michigan, Ann Arbor, Mich.

2:00 p.m. "Recent Advances in Diagnosis and Treatment of Anemia." Dr. Thomas Hale Ham, Professor of Medicine, Western Reserve University, The School of Medicine, Cleveland, Ohio.

2:30 p.m. "Involuntary Movements of the Muscles of the Body." Dr. Harry Lee Parker, Professor of Neurology, Graduate School, University of Minnesota, Rochester, Minn.

4:00 - 5:00 p.m. Panel Discussion. "Cardiology."

FRIDAY, MARCH 9

8:30 a.m. "Current Management of Difficult Labor." Dr. H. Close Hesseltine, Professor of Obstetrics and Gynecology and Secretary of the Department, University of Chicago School of Medicine, Chicago, Ill.

9:00 a.m. "Comparative Values of Vagotomy, Banthine and Gastric Resection in the Treatment of Peptic Ulcer." Dr. Keith S. Grimson, Professor of Surgery, Duke University, School of Medicine, Durham, N. C.

9:30 a.m. "Current Trends in Treatment of Esophageal Disease." Dr. Chevalier L. Jackson, Professor of Laryngology and Broncho-Esophagology, Temple University, Philadelphia, Pa.

11:00 a.m. "Virus Disease in Children." Dr. Joseph Stokes, Jr., William H. Bennett Professor, Department of Pediatrics, University of Pennsylvania School of Medicine, Philadelphia, Pa.

11:30 a.m. "The Effects of ACTH and Cortisone on Infectious Processes." Dr. Paul B. Beeson, Professor of Medicine, Chairman of the Department of Medicine, Emory University School of Medicine, Emory University, Ga.

1:30 p.m. "When is a Sprain not a Sprain?" Dr. James K. Stack, Associate Professor of Bone and Joint Surgery, Northwestern University Medical School, Chicago, Ill.

2:00 p.m. "Disseminated Lupus Erythematosus." Dr. Louis A. Brunsting, Professor Dermatology and Syphilology, Mayo Foundation Graduate School, University of Minnesota, Rochester, Minn.

2:30 p.m. "Recent Contributions to the Early Diagnosis of Gastric Carcinoma." Dr. H. M. Pollard, Associate Professor Internal Medicine, University of Michigan, Ann Arbor, Mich.

3:30 - 4:30 p.m. Panel Discussion "ACTH."

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

At a special meeting of the American Board of Obstetrics and Gynecology, held in Pittsburgh, Pennsylvania, December 14, 1950, the following changes in the regulations of the Board were unanimously adopted:

1. That physicians otherwise qualified, who were graduated before January 1, 1939 and whose required training was in obstetrics or gynecology alone, and who have confined their practice to obstetrics or gynecology for at least five (5) years immediately prior to application be accepted for examination as candidates for certification in either obstetrics or gynecology. In all other respects requirements for eligibility remain the same for those physicians graduated since 1939. Bilateral training is required as published in the Bulletin of the Board.

2. Applicants who have been certified by one of the other American Specialty Examining Boards will not be eligible for certification by this Board until they have relinquished the certificate previously conferred.

3. Since the vast majority of obstetrical and gynecological cases are non-operative the Board requires adequate training in basic sciences, infertility, endocrinology, oncology, irradiation therapy, psychosomatic medicine, electrotherapy, and other non-operative methods of diagnosis and treatment as well as training in major operative procedures.

Paul Titus, M.D.
Secretary

WOMAN'S AUXILIARY NOTES

Our Public Relations sphere this year will cover world events and must, therefore, be flexible. We must become informed as to plans of our parent organizations and be able to adjust to changing public needs.

We are advised that Civilian Defense is here to stay. According to Dr. Henrietta Herbolsheimer, who serves with Major Lenox Lohr on the State Civil Defense Committee, we, the women, will not take a secondary position in this emergency and must make comprehensive plans IMMEDIATELY as to how we, as doctors' wives, can assume the lead among women in serving our communities. All Civil Defense planning is done on a local level, the State serving as co-ordinator. Wisest action, therefore, would be to organize NOW through your local Civil Defense Chairman. Take inventory and inform him concerning the number of doctors' wives who will work in the various fields, i.e. registered nurses, dietitians, technicians, welfare workers, stenographic workers and those trained in child care. There will be work for everyone of us. Among other things, we will be called upon to assist in making surveys of existing stockpiles of essential materials in our local hospitals and drug stores. These stockpiles will include such materials as morphine, barbiturates, bandages, burn ointments, antibiotics, etc. available in event of emergency.

It is imperative that every home have at least one person trained in Home Nursing and First Aid. These courses are available through your local Red Cross Chapter, and that organization is eager to train any interested group.

In event of enemy attack all local hospitals will be expected to open branches in public buildings to increase their facilities tenfold. The main hospital will be the chief laboratory and operating room. In the branch hospitals one registered nurse will supervise a number of those trained through the Red Cross courses. So, it is obvious that a tremendous number of hands and vigilance be necessary.

Auxiliary members have been urged to organize study groups within their respective County auxiliaries which will afford every member the opportunity to learn how to protect herself in the event of atomic attack, and enable her to speak before lay groups and assure them that their health and well-being is of prime importance to us, as doctors' wives, and the people will be cared for whether in peace or war.

The following publications are recommended for the study groups: "How to Survive An Atomic Attack" by Richard Gerstell, published by Bantam Press Inc., price 25 cents, and available at most newstands—or at 25 W. 45th Street, New York, N. Y.; "Civil Defense" and "Survival Under Atomic Attack", both available through the Superintendent of Documents, U. S. Gov't. Printing Office, Washington 25, D. C. Price, 10 cents. The last publication listed should be a *must* in every American home. It would be a wise gesture to suggest that local organizations send for them in large quantities for distribution to members. The following excerpt is especially important:

"SIX SURVIVAL SECRETS FOR ATOMIC ATTACK"

1. TRY TO GET SHIELDED
2. DROP FLAT ON THE GROUND OR FLOOR
3. BURY YOUR FACE IN YOUR ARMS
4. DON'T RUSH OUTSIDE RIGHT AFTER BOMBING
5. DON'T TAKE CHANCES WITH FOOD OR WATER IN OPEN CONTAINERS
6. DON'T START RUMORS

Briefly, then, let us plan for the worst and hope for best, and prove by performance that we, along with our doctor husbands, are worthy of the vote of confidence placed in them and their profession as evidenced on November 7, 1950.

WESTERN INSTITUTE ON EPILEPSY

The Third Western Institute on Epilepsy will be held in Salt Lake City, Utah, the weekend of June 15 to 17, 1951. This meeting will be of wide interest to physicians, social workers, public health nurses, employers, teachers, rehabilitation workers, state hospital personnel, educational leaders, etc. A small registration fee will be required.

Further information may be obtained by writing to Dr. Harriot Hunter, University of Colorado Medical Center, 4200 East 9th Avenue, Denver, Colorado, or Dr. Jean P. Davis, University of Utah, College of Medicine, Salt Lake City, Utah.

"YOUR MENTAL HOSPITALS" SECURITY HOSPITAL

Sixty years ago, the first male patient was admitted to the Illinois Asylum for the Insane. This institution was built in the southwestern section of Illinois at Chester, on a high bluff overlooking the Mississippi River. Although it is adjacent to the Menard Division of the State Penitentiary, there is no direct relationship between the two institutions. They are operated by separate departments of the State.

A Board of Prison Commissioners operated the institution until 1917 when control passed to the Department of Public Welfare. The institution was renamed the Chester State Hospital and later named the Illinois Security Hospital.

In general, the purpose of the institution is to provide for the care and treatment of male persons adjudged by the courts to be either mentally defective or psychotic at the time of their trial, following the commission of some criminal act. In addition, mentally ill and mentally defective patients are transferred from other State hospitals because of their inability to adjust at these facilities. They are usually patients of a violent, aggressive nature or patients who, by reason of their many escapes, cannot be retained except under conditions of maximum security.

The hospital also receives patients who are neither mentally defective nor psychotic but who are found to be suffering from a mental disorder known as sexual psychopathy. These patients are committed by specific statutes providing for the hospitalization of those persons showing propensities for the commitment of sex crimes.

The following is a grouping of the patients now in the Illinois Security Hospital:

Classification of Patients	*Number*
Mentally Ill	275
Mentally Defective	88
Criminal Sexual Psychopath	16
TOTAL	379

Of this number, approximately 43 per cent were court mittimus cases.

The therapies available for treatment include electric shock, group, occupational, industrial, psycho-, and the hydro-therapies. The clinical team includes the following full-time personnel: psychiatrist, psychologist, psychiatric social worker, nurse, and recreational director. The Occupational Therapy Department employs trained occupational therapists. Approximately 55 per cent of the patients have some regular assignment in either the occupational or industrial therapy programs. The remaining patients who cannot participate in these activities are included in the recreational therapy program.

Frequent examination and mental testing is made of each patient. In addition to these examinations, the Chief Medical Officer of the Department of Public Welfare provides the consultant services of three psychiatrists from the Illinois Neuropsychiatric Institute. These psychiatrists visit the institution once every three months and review cases and make recommendations concerning the disposition of each.

Provisions for the care and treatment of the patients are very similar to those existing at the other State hospitals under the supervision of the Department of Public Welfare. This institution varies inasmuch as there are no provisions for conditional discharge. The physical plant is constructed with the idea of maximum security. There are no open cottages, and all wards are locked wards. Although the rehabilitation of the patient is the primary concern of the hospital, the operation of a secure institution goes hand-in-hand with this objective.

George A. Wiltrakis, M.D.
Deputy Director

AEC OFFERS FOUR FELLOWSHIPS IN INDUSTRIAL MEDICINE

The U. S. Atomic Energy Commission will offer four fellowships in industrial medicine for the 1951-52 academic year, continuing a special fellowship program begun last September. The program is administered for the AEC by the Atomic Energy Project of the School of Medicine and Dentistry, University of Rochester, Rochester, N. Y., and fellows are selected by a committee headed by Dr. James H. Sterner, Associate Medical Director of the Eastman Kodak Co., and Consultant in Industrial Health to the AEC.

The purpose of the special fellowship program is to provide advanced training and on-the-job experience to men and women medical doctors in the field of industrial medicine, particularly in relation to the atomic energy industry.

Awards are for one year's academic training

at approved institutions of the fellows' own choosing. After completion of this training, fellows will be eligible to apply for a second year's in-plant training at one of the major installations of the AEC. The stipend for the first year's training will be $3600, plus tuition and laboratory fees, and for the second, or in-plant, year, $5000.

The purpose of the special fellowship program U. S. who hold an M.D. degree from an approved medical school and who have had at least one year of internship. All fellows must be investigated by the FBI and cleared by the AEC for access to restricted data before entering on their fellowships.

Applications for the 1951-52 fellowships should be submitted by March 1, 1951 to A.E.C. Fellowships in Industrial Medicine, Atomic Energy Project, School of Medicine and Dentistry, University of Rochester, Rochester, New York.

CLINICS FOR CRIPPLED CHILDREN FOR MARCH

Doctor Herbert R. Kobes, director of the University of Illinois Division of Services for Crippled Children has released the March schedule of clinics for physically handicapped children. The Division will conduct 17 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical social and nursing services. There will be 4 special clinics for children with rheumatic fever and 1 for cerebral palsied children.

During 1950 children made 9,497 visits to general clinics, 654 to rheumatic fever clinics and 278 to cerebral palsy clinics. Attendance at rheumatic fever and cerebral palsy clinics is limited to invitations only.

Local medical and health organizations, both public and private, cooperate with the Division in providing this clinic service to Illinois' thousands of physically handicapped children. The examining clinicians are selected from private physicians who are certified Board members. Any private physician may refer or bring to a convenient clinic those children for whom he may want examinations or may want to receive consultative services.

The March clinics are:

March 6—Centralia, Franklin School
March 7—Joliet, Will Co. TB Sanitarium
March 8—Sterling, Sterling Public Hospital
March 8—Springfield, St. John's Hospital
March 8—Elmhurst (Rheumatic Fever), Memorial Hospital of DuPage County
March 8—Watseka, American Legion Home
March 9—Chicago Heights (Rheumatic Fever), St. James Hospital
March 13—Peoria, St. Francis Hospital
March 13—E. St. Louis, St. Mary's Hospital
March 14—Hinsdale, Hinsdale Sanitarium
March 14—Alton, Alton Memorial Hospital
March 15—Rockford, St. Anthony's Hospital
March 15—Jacksonville, Passavant Hospital
March 21—Evergreen Park, Little Company of Mary
March 21—Metropolis, American Legion Home
March 22—Anna, American Legion Home
March 22—Bloomington, St. Joseph's Hospital
March 23—Chicago Heights (Rheumatic Fever), St. James Hospital
March 27—Peoria, St. Francis Hospital
March 27—Effingham (Rheumatic Fever), Douglas Township Bldg.
March 27—E. St. Louis, Christian Welfare
March 28—Springfield (Cerebral Palsy), Memorial Hospital

In carrying on its program, the Division works cooperatively with local medical societies, hospitals, the Illinois Children's Hospital-School, civic and fraternal clubs, visiting nurse associations, local and welfare agencies, local chapters of the National Foundation for Infantile Paralysis and other interested groups.

The Division of Services for Crippled Children is the official state agency established to provide medical, surgical, corrective and other services and facilities for diagnosis, hospitalization, and after-care for children who are crippled or who are suffering from conditions which may lead to crippling.

ORIGINAL ARTICLES



The Need of Medical Service in Small Industry

J. H. Chivers, M.D.
Chicago

The industrial worker of America is demanding adequate medical care on a sound economic basis. If the medical profession of this country will provide this service, it can well be the saving grace against socialized medicine. That statement is neither startling nor original.

At no time in the past has the great mass of our population become so conscious of health, disability and the prevention of illness as they are today. This personal concern for health conservation and well being began after the first World War when we were confronted with large groups of returned men in need of rehabilitation from war casualty and disease. The second World War reiterated and emphasized the need for public concern of the large number of disabled and handicapped and gave impetus to a movement which developed into drives, associations and endowed funds for the study and treatment of disabling disease. A sympathetic public regard awakened for those unfortunate ones crippled with polio, heart disease and other afflictions considered as irremedial. This was followed by planned campaigns, almost crusades, for the specialized treatment, prevention and study of all types of disability, including polio, heart disease, epilepsy, diabetes, neuroses, as well as the care of amputees, the blind, the deaf, the arthritic and the aged.

All this has been effectively implemented by statistical reports from government bureaus, compensation boards, insurance files and public health agencies. Newspapers, radio, periodicals, pharmaceutical advertising and parent-teacher programs have all joined in the popular, and to some, the lucrative business of "Better health and prevention of disease." Good health has become a goal to be attained and retained. It takes not only education, proper diet, adequate housing, medicine and habits of life — it takes economic means to reach this goal, or at least to find out when one has reached it.

Presented before the General Assembly, 110th Annual Meeting, Illinois State Medical Society, Springfield, May 24, 1950.

The wage earner has become health conscious not only in relation to illness and accident caused by his job, but to any sickness which interferes with his work or his daily earnings. This cost of health maintenance has become an increasingly important factor in the economic life of the average worker. We as doctors are aware of the fact that the capital investment in medical education and practice has increased threefold in the past decade, and there are sound business reasons to justify an increase in fees for professional services rendered. But sometimes we do not realize that the cost of medical care is frequently beyond the economic means of many hourly paid employees. We forget that the man who punches the time clock frequently pays twice for his lost time illness, once for his hospital and doctor's bill and again in lost wages. In any prolonged absence under medical care this cost is a real hardship. The provisions for financial help through insurance protection have afforded some relief, but these benefits are limited, and unfortunately the money provided through insurance has not always been regarded by the doctor as a means of lessening the financial obligation of the disabled worker for his medical fee. Too often the fees increase proportionately.

The Council on Industrial Health of the American Medical Association has endorsed the following responsibilities within the scope of Industrial Medical service:

1. Adequate medical care of workers, disabled by reason of accident or illness caused from work.
2. Proper control over industrial environment for the prevention of disease or injury in industry.
3. The education of employees on problems of health by consultation, advice and guidance.

Most of the large employers with an established medical department are providing this pattern of ethical medical service to workers on all matters pertaining to their health, their sickness and their well-being. Medical service in industry is much more than the rendering of care for accidents and illness arising from work. The physician in industry who has an understanding of the social and economic problems of the worker can exercise a far reaching influence in counselling and advising on matters of sickness and health affecting the worker and his dependents. The physician in industry knows how frequently the worker gropes from doctor to doctor and clinic to clinic trying to find the answer to his wife's illness or his child's complaint. The man needs sound objective guidance — not neighborly recommendations.

In addition to certain direct medical responsibilities, the practice of industrial medicine is fundamentally a cooperative planning on the part of management, labor and the medical profession. Large industry has set the pattern because of a more favorable economic position to adopt changes in the employee relations program. During the past year representatives of management and labor have given considerable attention to what are called welfare benefits for workers. This means pensions, hospitalization and medical insurance, sick leave, etc. I can assure you that organized labor is serious in this matter. The wage earner is demanding adequate and timely medical care and he expects this professional service to be rendered within his pay check purchasing power. If, in the proper treatment of his illness, it is necessary to have blood transfusion, antibiotics or special nursing service, it shall not be withheld until he can raise the cash to pay for it.

The inauguration of group insurance for hospital and medical benefits was an employer's device to meet the needs of his workers. It was intended to provide financial assistance for a personal responsibility and yet maintain a free choice of doctor. At the beginning the medical profession was rather lukewarm to the idea — management is not medically trained and only to a small degree medically minded, but experience in the large industry has shown that where management concerns itself about the medical problems of the workers, there is a favorable result on production costs, absentee loss and employee relations. As I mentioned before, the employers in large industrial plants have adopted a medical program for their workers. In the small companies of 100 workers or less this need is not yet met, but the demand is definitely present.

A recent tabulation of wage earners in Illinois indicates that approximately 65 per cent of the million and a quarter workers are employed in manufacturing plants of 800 employees or less. Governor Stevenson in a talk on May 1st open-

ing the Governor's Conferenee on Industrial Safety said "Seventy per cent of industry in Illinois has no satisfactory program or safety procedure for the protection of workers. I daresay more than 70 per cent of industries have no medical program." It should be clear that by such a statement Governor Stevenson is ealling the attention of management and the medical profession to the need of a welfare program for our industrial workers.

Let me quote a statement adopted by the Medieal Society of the County of New York in May 1948 "This Medical Soeiety as an impartial professional group has a publie responsibili'y to industry and to labor to demonstrate the value and benefit of a health program for small industries and to serve as a catalyzing agent in bringing all interested agencies together in realizing a community program for better industrial health."

From a business point of view the owner of a small industrial establishment cannot afford to maintain an individual medical department. He purchases insurance for his compensation liability and refers to the insurance doctors such accident and illness as are attributable to work. However, during the last year, as a result of labor negotiations, there has been a tendency for the management of small plants to provide the workers with hospital, surgical and medical benefits. These benefits are paid for entirely by the employer in lieu of pension plans. This in itself is not an adequate medical program.

For this reason group medical service is found to be advantageous. A number of small industries band together and through cooperation of the local medical society obtain the necessary medical personnel to carry out an adcquate and well integrated medical program. The pattern and scope of medical service in these clinics follow closely the type of care rendered by the medical department of the large employers. In Hartford, Connecticut, Cincinnati, Minneapolis, Burbank and quite recently in Denver, industrial clinics have been operating with astounding satisfaction to the workers, to management and to the participating physicians. Let me briefly describe the pattern of one such clinic which serves about twenty-five small industries with a combined payroll of 12,000 workers. The clinic is headed by a competent physician who has a genuine interest in applying the prineiples of preventive medicine, surgery and hygiene. In addition, there is a staff of three specialists and adequate nursing, laboratory, x-ray and clerieal personnel. The services rendered to workers of each company vary slightly, but consist of:

1. Care of all aeeidents and illness arising from work.
2. Preplaeement examination and periodic examinations of certain classified workers.
3. Scheduled visits to each plant and consultation with management on matters pertaining to industrial hygiene, sanitation, safety and communicable disease, rehabilitation, etc. At the same time the doctor is learning first hand about job environments and job requirements, as well as employment hazards.
4. Control of absenteeism on account of illness. Three day absence is reported to the clinie and the worker clears through the clinie before returning to work. Various surveys among industries in the United States show that absence due to illness averages six to eight days per year for each employee. However, where medieal serviee is provided and available, the average lost time per employee is two to three days.
5. Medical opinion regarding job changes, physical fitness for work, retirement, leave of absence, ete.
6. Advice and consultation to workers on personal medical matters.
7. Maintenance of medical records as confidential files.

It is not difficult to evalute the cost for such service on a per capita basis. Naturally, there will be variations in relation to the number of employees and the type of serviee rendered. Where there is an insurance carrier for the compensation liability, the fee for this service is negotiated with the insurance company. Nursing service in the plant is on an hourly basis, or in some instances the nurse is a paid employee of the plant. This type of service is entirely separate from any medical and hospital benefits provided by the employers in their group insurance coverage. The industrial clinic should not become a type of subsidized general practice. Group medical and hospital insurance allows free choice of doctor and hospital and that principle needs continual emphasis.

One difficulty in establishing this field of medical care has been the reluctance of members of the medical society to solicit their professional services. There is always the question of ethics. This gap between need and service is recognized by the Council on Industrial Health of the American Medical Association. There is now in preparation a suggested program to be sent to the various state societies as a guide in developing local industrial health programs. The purpose of this movement is to expand the practice of occupational medicine and surgery so as to meet the needs of workers in the small industries. This should be a cooperative endeavor by management, labor and the local medical profession. Every practitioner of medicine in an industrial area should be vitally concerned in this program.

We do not want the medical service of industry to become a subsidized general practice and yet some of the plans are turning in that direction. We do not want management and labor to believe that the insurance benefit provided by industry to secure free choice of doctor and to help meet the medical costs to workers is not serving that purpose, but is being diverted to the benefit of the doctor and the hospital — and yet there are an increasing number of case reports to support that conclusion. We do not want to ignore the fact that the Governor of Illinois has publicly stated that "almost seventy per cent of the workers in Illinois do not have adequate medical care in their place of employment." If we ignore these facts we are not "digging the grave for the ghost of socialized medicine."

Public Health From 1900 to 1950

Henrietta Herbolsheimer, M.D., M.P.H.
Springfield

At the turn of the century the United States was emerging from the period of the great epidemics. These mass phenomena of disease accompanied the extensive shifts in population incident to settlement of the West, large-scale immigration from abroad and the rural-urban shift incident to the Industrial Revolution. Cholera, smallpox, typhoid, virulent scarlet fever, and diphtheria had beseiged every area of the land and yellow fever and malaria had attacked the southern regions. Each took a heavy toll of lives and left in its wake a population mindful of the fact that something more than heroic individual initiative during an outbreak was necessary to control these visitations.

Fortunately, the turn of the century found western civilization in a period of rapid growth of knowledge important to health. By 1900, a few of the elements about the causative organisms of several diseases had yielded to the growing science of bacteriology; during the next 50 years an incredible abundance of facts and principles were to accumulate on both health and disease. Myriads of disease-producing organisms were identified and careful investigation revealed much about their behavior where man, plants, and animals are concerned. The Wasserman test for syphilis and the Schick test for diphtheria were developed; such curative and preventive biologies as diphtheria anti-toxin, anti-luetic drugs, vaccines for typhoid, dysentery, diphtheria, whooping cough, tetanus, cholera, and yellow fever became available; practical methods for the purification of water and the sanitary disposal of sewage were developed; and pasteurization was introduced as a means of making milk safe. From the laboratories and field research studies there came a wealth of knowledge about nutrition; the vitamins which controlled pellagra, beriberi, scurvy, and rickets were discovered. The relationship of iodine to

Medical Administrative Assistant to Director, Illinois Department of Public Health. Roland R. Cross, M.D., Director.

goitre and cretinism was established. In the latter half of this period insulin for treatment of diabetes and liver for pernicious anaemia were developed and other endocrine substances were isolated, purified and chemically manufactured for amelioration of other diseases due to disturbed function of the glands of internal secretion.

The half-century span which had known the two most devastating wars in the history of man was also to experience the discovery of new and wonderful antibiotic drugs—sulfonamides, penicillin, streptomycin, chloromycetin and aureomycin — and strange new complex chemicals like D.D.T., Bal, atabrine, the arsenicals, cortisone, and radioactive elements, all of which are of enormous value in pin-pointing the attack on forces inimical to the health of man. Great technical advances in diagnostic procedures and improvement in surgical skills were also characteristic of this period. The X-rays — discovered as a curious laboratory phenomenon by Roentgen in 1895 — were put to widespread use in both diagnosis and treatment. Out of the war experience, directly or indirectly, came great advances in the successful utilization of blood transfusions and blood derivatives as well as the impetus to develop skills in physical medicine and rehabilitation.

During this period of evolution of facts, certain concepts basic to their application were defined and acted upon. In the belief that good doctors are essential to public health the states enacted laws governing the qualifications of those who sought to practice the healing arts. Another prevailing idea was that over and above the availability of good doctors there is need for organized community effort to stimulate the use of medical service along preventive lines and to promote environmental sanitation and the kind of behavior and practices which will result in healthful living. To this end, states created Departments of Public Health and through successive legislation the powers and duties incumbent upon these Departments have evolved according to local circumstances and popular demand. Originally these powers were limited to collection of information about births and deaths, sanitary control of water supplies and sewage disposal and control of communicable diseases through investigation of epidemics. In consequence of popular education in matters of health and disease and as part of the general trend of looking to government for increased protection, the powers and duties of the various health departments had expanded to include sanitation of food handling; licensure of drugs and cosmetics; provision of clinics for control of venereal disease, cancer detection and diagnosis, mental health; licensure of hospitals and nursing homes; subsidization and supervision of sanitarium care of tuberculosis patients; subsidization and supervision of local health activities; and provision of preventive and curative medical care for the indigent and medically indigent.

Although in matters of health the powers of the state originally were soverign, the larger municipalities, with authority to do so, had organized departments of public health with staffs competent to handle the usual types of problems. The rural areas, however, with their health problems and their populations less well assembled had no community health service other than that provided by the ex-officio Board of Health comprised of the elected officials of townships, roads-districts, or counties.

It soon became apparent that this was not enough. The large cities with health departments, had been able to effect miraculous reductions in deaths due to communicable diseases, but the rural areas, once far more salubrious than the crowded places, still experienced outbreaks of preventable disease. On the heels of several rural health disasters from preventable causes, health departments on a county basis were established. The first full-time county health department with a staff of professional workers came into being about 1908. Slowly the movement for health services on a local county basis spread throughout the country. By 1950, 60% of the more than 3,000 counties embracing 70% of the people had availed themselves of the mechanism to provide for community action in problems of health. Although this fairly extensive coverage has been attained, few of the areas have the trained personnel and the funds necessary to carry out an adequate public health program.

In addition to licensure standards for various categories of health-service personnel and the creation of official health organizations at state, local, national, and international levels, other

basic principles of public health administration emerged and were incorporated into operative patterns. Chief among these ideas are (1) close and active cooperation of health authorities at all levels of government; (2) grants-in-aid tailored to particular needs; (3) establishment of voluntary health agencies to meet pressing problems and the enlistment of their cooperation in the web of community health service; (4) critical analysis of existing resources for meeting health needs; (5) application of the statistical method in the reporting and analysis of data on births, deaths, and illnesses; (6) continuing education of the professions and the public; (7) spread of the cost of catastrophic illness in accordance with the principles of insurance; and (8) utilization to the maximum of all available knowledge and procedures in the prevention of diseases and the improvement of health.

What were the leading health problems at the turn of the century and what change has been effected during these 50 years of bountiful increases in technical and general knowledge? It should be explained that for want of a better measure, the number of deaths attributable to a specific cause has over the years served as an index to prevailing health conditions. The ten leading causes of death, then and now, and the death rates per 100,000 population are given below:

1900		1946	
1. Tuberculosis	195	Heart	307
2. Pneumonia	176	Cancer	130
3. Diarrhea and enteritis	140	Accidents and violence	88
		Cerebral Hemorrhage	78
4. Heart	137	Nephritis	58
5. Nephritis	89		
6. Accidents and violence	88	Pneumonia	38
7. Cerebral Hemorrhage	77	Tuberculosis	36
8. Cancer	64	Premature Birth	29
9. Bronchitis	45	Diabetes	25
10. Diphtheria	40	Arteriosclerosis	17

Fifty years ago tuberculosis was the No. 1 killer. Today it has been reduced to 7th place and the means are at hand and the public is so moved to reduce it further in the next few years. The age group attacked by tuberculosis, too, has changed in the half century. In 1900, the young adult was the leading victim; today it is the older individual — the person who belonged to the population cohort which was severely affected when he was a young adult. The success achieved may be attributed to the combination of several factors; eradication of tuberculosis in cattle, pasteurization of milk, tuberculosis testing, sanitarium care, mass X-ray surveys, health education, and general rise in the standard of living.

Through other means, largely the availability of type-specific serum and the "miracle drugs" the same nature of reduction has taken place with pneumonia. Here, too, the largest decrease has occurred in the younger age groups with pneumonia still ranking high as a leading cause of death among the elderly.

Diarrhea and enteritis was a leading cause of death in 1900 but by 1950 it no longer appears in the list of the 10 most important. A large part of the problem at the earlier period was attributable to infectious diarrhea of infants. More widespread understanding of the principles of infant care, the use of pasteurized milk, better refrigeration and improvement in the general standard of living have resulted in the saving of many infant lives. Fifty years of progress have reduced the infant mortality rate from about 120 to 30 per 1,000 live births. Since most of this gain has occurred through control of infectious diseases, the reduction in losses among infants has been largely confined to the last eleven months of the first year of life with the result that deaths due to premature birth, congenital anomalies and birth injury have assumed new weight of importance.

Communicable diseases, particularly those of childhood — diphtheria, measles, pneumonia, scarlet fever, and whooping cough — were a serious threat to life and health fifty years ago. Then, when a child was attacked with one of these diseases, or even if he were only exposed, there was little of a specific nature that could be done to help him in his battle against the invading organisms. One of the list of the common communicable diseases — diphtheria — alone ranked among the ten most important causes of death half a century ago. In one state, Illinois, a thousand deaths were attributable to this single cause in 1900. Fifty years later, however, thanks to the development and widespread use of appropriate immunizing agents and antitoxic sera and the institution of isola-

tion procedures, only a few deaths are reported per year in the entire country. Scarlet fever, too, took a heavy toll, with, for example, 643 deaths reported in Illinois in 1900. None were reported in 1948 and only two in 1949. At the turn of the century there were 40,000 cases of smallpox per year in the United States; today, there are but 300-400 per year. Even this number could be prevented by vaccination. In Illinois there were no reported cases of smallpox during the two years 1948 and 1949.

Safe water and milk supplies, sanitary food handling and control of carriers has virtually eliminated typhoid fever from the metropolitan areas and has reduced this and other enteric diseases to a position of uncommon occurrence. Typhoid fever, which plagued armies for generations and which in so late a period as the Spanish-American War (1898) took far more American lives than did actual combat, was by virtue of the military programs in public health almost unheard of among American troops in World Wars I and II.

Through prevention and control of the various communicable diseases which affected primarily the young in the population, through the decrease in the birth rate and the curtailment of immigration we find that the last 50 years have produced a meaningful change in population structure in the United States.

1900 Per Cent of Population	Age Group	1950 Per Cent of Population
4.1	65 and over	7.7
13.7	45-64	21.1
37.8	20-44	38.2
32.3	5-19	24.7
12.1	Under 5	8.3
100.		100.

It is now apparent that people who are spared premature death from communicable disease survive to be afflicted with the degenerative conditions of older age. As can be seen in the table of causes of death here presented, heart disease, cancer, cerebral hemorrhage and nephritis are now the leading killers. These are conditions of highest incidence in the later years of life. Also, deaths among the aged make up a large portion of the total toll from accidents, pneumonia and tuberculosis. Diabetes is most common among middle-aged and older persons as is arteriosclerosis. In summary, then, all of the ten now leading causes of death except one — premature birth — are to a large extent a reflection of the population structure and are indicative of a new set of demands on preventive medicine and public health.

Under present conditions, it is expected that the shift to older groups in the population will continue — and at a rapid rate. Life expectancy has been increased from about 47 years to more than 68 years in this period of sanitation and communicable disease control. For those at 65 Dublin estimates that there is an expectancy of yet 12 years for males and 14 for females. For the health service personnel who have achieved the addition of years to life there now emerges the challenge to add life to the years.

While the age-old enemies of public health have to a large extent given way over this fifty-year period to a new set of phenomena, the old scourges are by no means completely annihilated. The causative organisms of all of the severe communicable diseases which harassed the people of 50 years ago are still with us today — and many new ones besides. The end result of 50 years of brilliant scientific achievement is, therefore, not complete victory but, rather, a balance of power. Through environmental sanitation techniques and personal hygiene, immunizations, new drugs, and health education, there has been established an ecological equilibrium favorable to man. This, unfortunately, is not a static equilibrium, but it is dynamic in the sense that any alteration in the host and parasite relationship may affect the present state of control. These alterations are going on all the time. From detailed analysis, it is possible to conclude that more extensive and intensive application of the principles of preventive medicine and public health, can bring about further tipping of the scales in favor of the man; it is also obvious, and all too frequently illustrated, that when the controls break down through incompetence or carelessness, disaster from acute communicable disease can and does result.

One might, on review of the remarkable accomplishments over the past half-century, conclude that there is just cause for satisfaction and complacency; this would be so were it not for the nature and the dimensions of the public health problems which have now emerged. Despite the fact that there are now more people

of advanced years in our population, the general (crude) death rate is only about half of what it was in 1900, and it has almost reached the irreducible minimum. Therefore, at the half-century mark, the actual tally of deaths has been altered in its meaningfulness as a measure of the nature and extent of public health. Although the age-specific and disease-specific death rates are still valuable pieces of objective evidence they no longer serve to reach to the heart of the matter — the question of the kind and extent of disabling illness. From the National Health Survey made in 1935, the extensive studies of the Committee on the Cost of Medical Care made in 1928-1932, and numerous subsequent studies it has become apparent that disabling illness is profoundly important not only to the happiness of the people but also the economics and welfare of the nation. Dublin estimated that in 1947 there were nearly 25 million Americans physically or mentally impaired and almost totally unproductive; 700,000 civilians with tuberculosis; 4 million people with heart impairment; 230,000 blind; at least 1.5 million mentally afflicted and more than 2.5 million crippled. These conditions are long-term or chronic illnesses which, in addition to taxing to the extreme the available medical knowledge, are enmeshed in an almost endless chain of socio-economic problems.

While in terms of numbers, gaps in knowledge, and the cost of services, the health situation at the mid-point of the century poses obstacles which are formidable, they are probably no less so than those conditions which confronted public health at the turn of the century. Perhaps, in another block of fifty years, with comparable application of resources and ingenuity, the same measure of gains may result.

Newer Drugs in the Therapy of Epilepsy

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Epilepsy may frequently be so refractory to therapy that any new drugs which offer hope of benefit are welcome additions to the therapeutic armamentarium of the physician. Of the many drugs now employed, there is none which is effective in all types of epileptic seizures or, for that matter, in a given type of seizure with any degree of consistency. It is therefore often necessary to experiment clinically with various drugs and in various combinations.

Since some forms of epileptic seizures are more amenable to specific drugs, it might be well first to classify the types of epilepsy. There are many classifications, but we have found the following general classification to be clinically useful:

I. Idiopathic, in which the most frequent type of attack is
   A. Grand mal
   B. Petit mal (more common in children)
   C. Psychomotor (more common in adults)
   D. Other equivalents, e.g. abdominal epilepsy, migraine, etc.

II. Symptomatic or organic, in which the most frequent type of attack is
   A. Jacksonian or focal
   B. Akinetic
   C. Myoclonic
   D. Any of the forms seen in idiopathic

It should be emphasized, at the outset, that the therapy of epilepsy includes more than drug therapy. Control of other factors is important. In a person with a convulsive diathesis, trigger mechanisms may exist: e.g., emotional disturbances; fevers; gastro-intestinal upsets; excessive intake of fluids, especially alcohol; constipation; frustrations; emotional tensions; and allergic episodes. Occasionally, the number of seizures increases during some period of the menstrual cycle. Even boredom due to lack of occupation

or recreation may increase the tendency to seizures. General hygiene and psychiatric care may in many cases be more important than drug therapy in controlling these spells. Even surgical measures may be resorted to in therapy, but only when medical management has failed and the spells are of a focal nature.

The modern therapy for epilepsy with drugs began in 1853 when bromides were first used. In 1912, phenobarbital was introduced, and dilantin sodium appeared on the scene in 1937. By 1944, two new drugs, tridione and mesantoin, were being investigated and since then other drugs, such as thiantoin, acid hydantoin, phenurone, gemonil and several others have been used. Chemically, many of the drugs are derivatives of urea. By an interchange of methyl, ethyl and phenyl radicals, the specific effectiveness, as well as the toxicity of the drug, may be modified. The dosages of the various drugs to be discussed are given for brevity in the appended table.

In the drug therapy of epilepsy, a beginning should be made with a single drug, gradually increasing the dose until control or maximun effect is achieved, or until a point is reached beyond which toxic symptoms may develop. If partial improvement but not complete control is achieved, then that improvement is retained by continuing with the same drug and adding another. Some patients respond best to one drug, some to another, and some to a combination of drugs. Whenever a drug is to be discontinued, it should be withdrawn slowly to prevent precipitation of a status epilepticus. Some drugs may control one type of seizure but aggravate or precipitate another type. The general statement should be made about all anti-convulsant drugs that the anti-epileptic effect should precede the toxic one, and that any drug which produces its toxic effect (and this includes drowsiness) before it produces the therapeutic effect is not ideal.

Frequency of dosage is usually three times a day. Occasionally it is necessary to give only two doses, but with certain drugs that are rapidly eliminated, four to five daily doses may be necessary. Where all spells are nocturnal, it may be permissible to give only a single dose at night before retiring. For special occasions of stress or excitement, as before birthdays, holidays, or menstrual periods, it may be necessary to increase dosages temporarily.

The objective of drug therapy is to achieve a clinical rather than electroencephalographic cure. None of the drugs (except tridione, and possibly also some newer ones) affect the electroencephalogram proportionate to the clinical change. It is possible to have a complete clinical remission in the presence of a continuing electroencephalographic dysrhythmia. Tridione, however, is one drug which has a tendency to normalize the electroencephalogram.

Many of the effective new drugs now commercially available have toxic potentialities. No patient should be allowed to continue on these drugs without close medical supervision. It is advisable for the physician to read carefully the literature and instructions supplied by the manufacturers regarding possible toxic effects and to guide themselves by these warnings. Unfortunately, not all manufacturers stress sufficiently these dangers, but it is hoped that reports of toxic effects will tend to remedy this situation.

As stated previously, some drugs have greater specificity for certain types of spells than others. In grand mal, the drugs of choice are phenobarbital (phenyl-ethyl-barbituric acid) and sodium dilantin (sodium di-phenyl hydantoinate) for initiating therapy. Both of these drugs have a greater anti-convulsant effect than the other barbiturates or the bromides. Dilantin, although having a strong anti-convulsant effect, frequently precipitates or increases petit mal attacks, a form of seizure much more frequent in children than adults. Phenobarbital, on the other hand, has no such tendency to increase petit mal attacks, but does occasionally aggravate psychomotor attacks, a form of seizure rare in children and more frequent in adults. Thus, in children with grand mal seizures, phenobarbital would be the initial drug of choice, while in adults with the same seizures, dilantin would be preferable. By the same token, a patient having both grand and petit mal spells would be expected to respond better to phenobarbital, whereas if grand mal and psychomotor seizures coexisted, dilantin would be the drug of choice.

Of the common barbiturates, phenobarbital is unique in that its anti-epileptic effect is all out of proportion to its soporific action. It should be borne in mind that children can tolerate rel-

atively larger dosages of this drug per pound of body weight than can adults. In the event that the epilepsy is controlled by phenobarbital, no other medication is necessary. If control is only partial, however, dilantin or some other drug may be added. If phenobarbital has no beneficial effect, another drug should be substituted.

The most common side effect of phenobarbital therapy is drowsiness, which can be combatted by the use of benzedrine or dexedrine, in the event it is found desirable to continue the drug. Rashes are rare in children and more common in adults. The great advantage of phenobarbital lies in its relatively innocuous character.

Sodium dilantin is available in ½ gr. and 1½ gr. capsules. The toxic effects include vertigo, dizziness, diplopia, ataxia, hyperplasia of the gums, skin rashes, and occasionally hirsutism. Since sodium dilantin is strongly alkaline, it may sometimes cause gasro-intestinal upsets which may be alleviated by adding a little orange juice or mixing the drug with food. Acid hydantoin (tri-ethyl-phenyl-hydantoin) is similar to sodium dilantin except that it is acid in reaction and hence does not cause the same gastro-intestinal irritation.

Mesantoin (methyl-phenyl-ethyl hydantoin) is one of the newer drugs related to dilantin, but frequently more effective. It causes much less gingivitis, diplopia and ataxia, but is more likely to cause rashes, including exfoliative dermatitis, agranulocytosis, and occasionally hepatitis. However, it is fairly safe to use in children. One of the non-publicized dangers in the use of mesantoin is its synergistic toxic action when administered together with tridone or paradione. The toxicity of both of these classes of drugs is much more enhanced when they are given together than when they are given separately. Mesantoin, therefore, should never be given in combination with the two latter drugs. Unlike dilantin, this drug does not have the tendency to precipitate petit mal spells. In some instances, it actually controls them. It is, therefore, effective in cases with both grand mal and petit mal. Mesantoin is available in scored tablets of 1½ gr. Some patients respond best to phenobarbital, some to dilantin, some to mesantoin, some to a combination of two or three of them.

Bromides are not as valuable as any of the previously mentioned drugs in controlling grand mal spells. Occasionally, however, they will inhibit spells not affected by any other drugs. The bromides in the form of the sodium salt or as a mixture of equal parts of sodium, potassium, and ammonium bromides, should be given in prescribed dosages until a blood bromide level not above 100 mg. per 100 cc. is reached. Levels above this may be toxic. The side effects of bromides are drowsiness and confusion. Acneiform bromoderm is frequently seen, which is a troublesome symptom, especially in adolescent girls. If a bromide rash appears, the drug should be discontinued and sodium chloride intake increased.

The most effective drugs in grand mal are those previously mentioned. There are, however, several other hydantoin analogs which have some anti-convulsant activity, but none of them to a degree comparable to those already discussed.

Of these, thiantoin (sodium-phenylthienyl hydantoin) is most beneficial. It has practically all of the side effects of dilantin except for the gastro-intestinal but is not clinically as efficacious. It does not tend to precipitate petit spells as does dilantin; it is, however, occasionally found to be useful when all others fail. It is available in 2 gr. and 4 gr. capsules.

Petit mal seizures have always been less amenable to drug therapy than grand mal. The recent introduction of tridione has, therefore, helped fill a most pressing need. Tridione (3, 5, 5-trimethyl oxazolidine-2, 4-dione) is the most effective drug yet introduced in the treatment of petit mal spells. The drug is also effective in some conditions associated with basal nuclear lesions; for example, athetosis and in certain behavior disturbances. Its similar favorable effect in petit mal might lend credence to the suggestion that petit mal spells arise not from the cortex but from the midbrain. The effect of tridione upon petit mal is often spectacular. It is available in 5 gr. capsules, and in an elixir and in dulcet form, each of the latter containing 2½ gr. to the dose. Approximately 70 per cent of the cases of idiopathic petit mal are benefitted. In children with petit mal associated with organic brain disease, however, the percentage of success is much less.

Tridione, unlike dilantin or phenobarbital, does not produce exacerbation of symptoms upon withdrawal. However, it does occasionally tend to precipitate or aggravate grand mal spells. Thus, in cases in which petit mal and grand mal coexist, tridione should not be given alone, but in combination with either phenobarbital or dilanin. As pointed out previously, its use with mesantoin is dangerous because of the synergistic increase in toxicity. The most common toxic symptoms from tridione are blurring of vision, and bright light blindness or hemeralopia. In some instances rashes develop which may be morbilliform and occassionally exfoliative. More serious, however, is its effect on blood and bone marrow. Leukopenia and agranulocytosis may result. Fatalities have been reported from its use. Side effects are seen in only 10 per cent of children and 30 to 40 per cent of adults, which makes tridione a more valuable drug in pediatrics, where petit mal is more commonly seen. Individuals receiving tridione should have blood counts at least once a month. A fall in the white blood count below 3,000 is an indication for stopping the drug.

Experiences with tridione indicate that there may be more than one kind of petit mal seizure, since tridione seems to control primarily petit mal spells when they are of short duration. When control is not complete, it is often noted that the remaining spells are usually of a much longer and more severe type than those originally present.

A new drug just released commercially is paradione (3, 5-dimethyl-5-ethyl-oxazolidine-2, 4-dione) an analog of tridione. It is somewhat less effective than tridione in petit mal spells but may sometimes control petit mal not controlled by tridione, especially the longer spells. It seems also to be more effective than tridione in controlling petit mal due to organic brain disease. There are fewer side effects with paradione than with tridione, especially less disturbance of vision and fewer rashes. Toxic effects on the blood may occur, however. It is available in 5 gr. soft elastic capsules, and as a liquid concentrate containing 5 gr. per cc. It is best given in combination with some other drug like phenobarbital or dilantin, but should not be given with mesantoin, since like tridione, it has a synergistic toxic effect with it. Individuals who are receiving tridione or paradione should receive periodic blood counts.

There are other drugs which can often be employed in petit mal. As previously mentioned, mesatoin is occasionally useful, as is mebaral (N-methyl-ethyl-phenyl-barbituric Acid). The latter drug, which also has some anti-convulsant action, has less of a sedative effect than phenobarbital and can be given generally in dosages twice as large. No ill effects other than drowsiness have been observed. It is available in ½, 1½, and 3 gr. scored tablets.

Occasionally, stimulant drugs like caffeine and benzedrine may be beneficial in petit mal. Benzedrine may be given in dosages of 2½ to 10 mg., twice a day (omitting the last dose in order not to interfere with sleep), and caffeine can be given in dosages of 1 to 5 gr., t.i.d. Recently, some of the anti-histaminics have been reported as valuable in epilepsy, but our own experience with these has not been favorable.

Occasionally, also, acidifying drugs have been found to have some benefit in petit mal, and thus, ammonium chloride or glutamic acid can occasionally cause some improvement. Acidification is not generally effective, however, unless given in the form of a ketogenic diet. The ketogenic diet is of great value in petit mal, particularly in young children. The drawback is that is it difficult to administer in a home situation.

In psychomotor epilepsy, the most beneficial drug is phenurone (phenacetylcarbamide), which is more effective in this condition than any previously mentioned drug. Phenurone is effective also in both grand mal and petit mal, and thus is an all-purpose drug. It is effective in approximately 40 per cent of the cases and may control grand mal and petit mal spells not controlled by any of the other drugs. It is not yet commercially available but is supplied in 7½ gr. scored tablets. Its mode of action on psychomotor seizures is not known.

Among its side effects must be mentioned a peculiar hyperexcitability, bordering on the psychotic. Frequently, the children are described by the parents as being refractory and to manifest a type of hyperactivity frequently seen in the post-encephalitic. Rashes are not uncommon, particularly in children. These are morbilliform in nature and usually appear about a

week after the drug is started and are associated with high temperature. It is not unlike the rash produced by nirvanol. After the drug is stopped and the rash disappears, it can be made to reappear following a single dose of phenurone.

Among the other drugs which have a beneficial effect in psychomotor epilepsy must be mentioned mesantoin, tridione, and occasionally dilantin.

It may be stated as a categorical generality regarding drug therapy in epilepsy that idiopathic forms of the disease are more amenable to therapy than are forms due to organic brain disease. In the presence of organic brain disease, unexpected and contradictory drug actions are encountered. Thus, tridione and paradione may occasionally be more effective than dilantin or phenobaribital in controlling grand mal spells, and likewise, phenobarbital or bromides may be more effective than tridione in controlling petit mal spells. Among the most difficult epileptic symptoms of organic brain disease to treat are the akinetic and the myoclonic spells. In these conditions, which are generally due to organic brain disease, all combinations of drugs should be employed before the case is considered as not amenable to drug therapy.

A drug with interesting properties is gemonil (di-ethyl-methyl barbituric acid) which is not yet commercially available. This drug has the unique characteristic of being more effective in seizures associated with organic brain disease than in idiopathic epilepsy. In a limited series of approximately 60 cases, it was beneficial in but 2 of 21 cases of idiopathic epilepsy, and in about 19 of 38 cases with organic brain disease. Its greatest theraputic effect appeared to be in the myoclonic type of seizure, where it greatly improved 8 of 13 cases. It is available in 1½ gr. scored tablets and is given in dosages about double that of phenobarbital. The only side effects noted to date have been drowsiness, and in one case, a morbilliform rash.

Several other drugs which offer promise of good anti-epileptic action are now being investigated, but experience with these has been too limited to include them in this discussion. For purposes of clarification, a table is appended, giving the names, formulae, indications, toxic effects and dosages of the drugs discussed.

The therapy of epilepsy is an individual problem, one patient with convulsions being controlled by a drug that has no effect on another patient with similar seizures. All of the drugs have some objections, either in the form of side effects or the tendency to aggravate certain types of seizures. Knowledge of the drug to be used, the trial and error method of its administration, patience, and above all, an understanding and control of all the factors involved in the care of each patient, remains the method of treatment of the epileptic syndromes.

SUMMARY

1. Phenobarbital is the drug of choice for grand mal seizures in children, and dilantin in adults, or combinations of the two.
2. Mesantoin is the drug of choice when both grand mal and petit mal coexist.
3. Bromides may be employed when none of the above are effective.
4. Tridione and paradione are the drugs of choice for petit mal. Both of these drugs have a synergistic toxic effect with mesantoin.
5. Phenurone is an all-purpose drug, being effective in psychomotor spells, where it is more efficacious than any other drugs; it is also beneficial in grand mal and petit mal.
6. Gemonil has the unique property of being more effective in organic brain disease than in the idiopathic form, and particularly in myoclonic spells.
7. Where single drugs are not effective, combinations may be tried, except for the previously noted contraindication to the combination of mesantoin with tridione and paradione.
8. The physician should be constantly aware of the toxic potentialities of the drugs he employs and alert to the occurrence of side effects. When tridione, paradione, or mesantoin are given, periodic checks of the blood are essential. Evidence of agranulocytosis is indication for discontinuance.
9. The control of hygienic and psychiatric factors is important as an adjunct to the drug therapy of epilepsy.

TABLE 1

CLINICAL EFFICACY OF DRUGS BY TYPE OF SEIZURE

Drug	Chemical Formula	Available Form	Dosage		Therapeutic Effect				Ill Effects
			Amount	Times Daily	Grand Mal	Petit Mal	Psychomotor	Myoclonic	
Bromide	sodium, potassium and ammonium bromide	Tablets-0.3, 0.6, 1.0 gm. Elixir-1 gm./tsp.	0.3-1 gm. (5-15 gr.)	2-4	++	+	+		Rash, confusion
Phenobarbital	phenyl ethyl barbituric acid	Tablets-0.015, 0.03, 0.06 and 0.1 gm.	.015-0.1 gm. (¼-1½ gr.)	2-4	++++		A		Drowsiness
Dilantin	sodium 5, 5-diphenyl hydantoinate	Capsules-0.03-0.1 gm. Capsules in oil-0.1 gm.	0.03-0.1 gm. (½-1½ gr.)	2-4	++++	A	+	±	Gingivitis, rash, ataxia, diplopia
Tridione	3,5,5-trimethyl oxazolidine-2,4-dione	Capsules-0.3 gm. Dulcet-0.15 Solution-0.15 gm./tsp.	0.15-0.6 gm. (2½-10 gr.)	2-4	A	++++	++		Visual disturbances, rash, blood changes, mesantoin synergy
Paradione	3,5-dimethyl-5-ethyl oxazolidine-2,4-dione	Capsules-0.3 gm. Liq. Conc.-0.3 per cc.	0.15-0.3 gm. (2½-5 gr.)	2-4		++	+		Blood changes, mesantoin synergy
Thiantoin	sodium 5-phenyl-5-thienyl hydantoinate	Capsules-0.13 and 0.26 gm.	0.06-0.26 gm. (1-4 gr.)	2-4	++				Same as dilantin
Mesantoin	3-methyl-5,5-phenyl ethyl hydantoin	Tablets-0.1 gm.	0.04-0.1 gm. (¾-1½ gr.)	2-4	+++	+	+	±	Rash, hepatitis, blood changes
Mebaral	N-methyl ethyl phenyl barbituric acid	Tablets-0.03, 0.1, 0.2 gm.	0.03-0.2 gm. (½-3 gr.)	2-4	+	+			Drowsiness
*Phenurone	Phenacetylcarbamide	Tablets-0.5 gm.	0.25-1.0 gm. (3⅞-15 gr.)	2-5	++	++	+++		Hyperexcitability, personality disturbances, rash, fever
*Gemonil	5,5-diethyl-1-methyl-barbituric acid	Tablets-0.1 gm.	0.05-0.2 gm. (¾-3 gr.)	2-4	+	±		++	Drowsiness
Ketogenic diet									Difficult to administer at home

*Not yet commercially available

KEY: ± +, ++++ = therapeutic efficacy by degree
A = aggravates

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What Belongs in the Physician's Bag?

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Edited by:
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Dr. Max Samter, Assistant Professor of Medicine: The problem of the physician's bag has an intriguing attractiveness. As a matter of fact, many physicians at the Research and Educational Hospitals have requested on several occasions that we devote one of our programs to the subject. We have hesitated to do so because we felt that each man's opinion would be colored by personal preference, professional requirements, and regional considerations. In other words, such a Seminar should be prefaced by a rigid definition of where, when, and how the bag is going to be used. We hope, however, that by confronting Dr. Vorhaus' "ideal theoretical bag" with Dr. Weihe's time-tested and patient-tested bag we might be able to decide on a compromise bag which might prove useful for our outgoing staff of interns and residents.

Dr. Louis J. Vorhaus, II. I am quite aware of the fact that my presentation lacks one of the essential ingredients of a convincing argument, namely, experience. However, I have given the matter some searching thought as a theoretical problem and have been so aided by several articles on the same subject by others who have theorized regarding the optimal contents of the physician's bag. I understand that Dr. Weihe,

who will discuss my suggestions, is a highly successful physician who engages in general practice as well as in emergency work for the Fire and Police Departments of his neighborhood. I hope that his comments will clarify the actual needs of a physician in contrast to what a resident in a teaching hospital thinks might be needed.

The equipment which a given physician must carry in his bag depends obviously on a number of factors including (1) the type of community in which he practices — large city, suburbs, small town, rural area; (2) the adequacy of ambulance and hospital service; (3) the type of his practice — general, pediatric, obstetrical, surgical, or other; and (4) the strength of his right arm and his willingness to use it, respectively; in other words, on his philosophy toward Medicine.

My own reasoning about the contents of the physician's bag can be expained as follows: he should carry sufficient equipment and medication to render adequate treatment in any conceivable emergency. On the basis of this premise, you will find items in my list which might never be used in a long lifetime of medical practice; even so, I suspect that most practitioners will recall situations which could not have been handled effectively without the armamentarium which I propose though those occasions should indeed be rare.

Lest you scoff at the portability of such an array, let me state at the beginning that I have, without undue compression, adjusted all of the items which I am going to list into one large-size commercially available physician's bag. First then, instruments and other tools for diagnosis and therapy:

Diagnostic Equipment: (1) Stethoscope; (2) Sphygnomanometer; (3) Otoscope; (4) Ophthalmoscope: (5) Reflex hammer; (6) Tongue blades; (7) Glass slides; (8) Tablets for urine sugar, albumin, acetone, blood and nitrazine paper for pH; (9) Rectal and oral thermometers; (10) Sterile and non-sterile gloves with lubricating jelly (11) Lancet; (12) Hemocytometer, solutions, red and white counting pipettes; (13) Sterile swabs in sterile glass tubes for cultures.

Therapeutic Equipment: (1) Tourniquet. Some say to carry four so that blood can be pooled in acute pulmonary edema. (2) Stomach tube (Levine and large bore). (3) Bulb syringe. (4) Cotton applicators. (5) Cotton balls. (6) Sterile surgical instruments (small and large scissors, blunt and pointed forceps, scalpel, 2 large and 2 small hemostats, needle holder, needles and suture material). (7) Sterile syringes (2, 10, & 20 cc with an assortment of sterile needles of varying lengths and gauges. (8) Sterile bandages of various sizes. (9) Sterile vaseline gauze. (10) Adhesive. (11) Nasal speculum. (12) Tracheotomy set or "life-saver tubes". While several writers have emphasized their occasional usefulness, I do not feel qualified to comment on the advisability of carrying them routinely. Item (13) Prescription blanks — leads us over to my list of indispensable drugs. Before continuing, however, I feel that Dr. Weihe might like to comment on the diagnostic and therapeutic equipment which I have outlined so far.

Dr. Weihe: To the busy practitioner portability becomes a premium and improvisation eliminates some of the infrequently called-for items The reflex hammer, for example, can be dispensed with, and any handy solid instrument used in its place when necessary. I rarely use the tongue blades, mainly because they tend to frighten the children who make up a large part of my general practice. I carry a thermometer but seldom use it. If fever is present, it is obvious without this instrument and can usually be accurately predicted. Diagnostic equipment for blood counts sounds very good, and I orginally did some of my own counts. However, I soon discovered such discrepancies in my determinations, that I now trust only the work of an experienced laboratory technician. If the determination is of critical importance, the patient should be hospitalized. I do not carry sterile gloves or instruments, though I did when first entering practice. If a patient is seriously injured, I do not feel that having sterile instruments in my bag will make the difference between his living or dying. Hospital care should be administered without delay. I do no suturing except in the office or hospital.

I carry unsterile ambidextrous gloves in my bag. In doing a rectal or pelvic, I used household bar soap to lubricate the glove as it washes off much easier than lubricating jellies. Following the examination, I wash the glove while still

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on my hand, dry, powder with talcum. Then I pull off the glove inverting it thereby. It is immediately ready for the next examination.

I carry two tourniquets; 1 catheter; used to carry a Levine tube. Bandaids are the only bandages in my bag. As for syringes, I have two 2 cc syringes with Luer-lok attachments kept in a 70% alcohol solution. I have used them repeatedly over many years without a single infection. I also carry a sterile dry 10 cc syringe with long needle for procaine injections. The Luer-lok attachments is of value to prevent the spraying of viscid solutions such as procaine penicillin all over the patient and yourself due to failure of the needle to stay on the hub.

I should like to emphasize that the practice on which I base my emergency bag needs is a suburban practice, and that ambulance service and hospital facilities are within close reach of my entire practice. I am sure my needs would be modified under different conditions.

Dr. Vorhaus: I should now like to exhibit, more or less in the order I removed them from my bag at home, the drugs I feel should be in such a bag.

DRUG	DR. VORHAUS' COMMENT	DR. WEIHE'S COMMENT
chloral hydrate paraldehyde	for alcoholic psychoses	For alcoholics I prefer i.v. caffein and sodium benzoate plus 4 cc. mag. sulfate i.m.
seconal		Main use of barbiturates is for the families of the recently deceased.
phenobarbital, oral and i.m. Sodium amytal (i.v.) morphine sulfate codeine A.P.C. or aspirin		You're competing with the corner druggist
Demerol oral and i.v. Digitoxin oubain	or other fast acting digitalis preparation, e.g. Lanatucide C.	
quinidine		I don't use. . .
mecholyl	paroxysmal tachycardia	Carry, but seldom use. . .
amyl nitrite nitroglycerine	angina pectoris angina pectoris	I carry. . .
atropine, oral & i.v.	mushroom poisoning, among other uses	
papaverine, oral and i.m. i.v. and suppository aminophylline		I use a lot of . . . . In coronaries I give 7½ gr. plus papaverine i.v. and follow with Demarol. . .
epinephrine sol. 1:1000		Definitely needed. . .
Coramine Metrozol	barbiturate intoxication	I carry these two. . . .
pictrotoxin caffein & sodium benzoate		Included in my bag.
spirits of ammonia (pearls)		Wonderful stuff! A deep whiff knocks you off your feet, then you feel better. About 8c each.
magnesium sulfate Dilantin	for pt. who is having repeated convulsions over short periods of time.	I don't use. . .
Mercuhydrin		Included in my bag. . . .
oral and i.v. *Benadryl		I use a lot of. . . . .
Dramamine	for marked nausea	I prescribe.

Prostigmine	acute collapse of myasthenic	I've found this valuable for the heartburn of pregnancy
Pitocin	post-partum hemorrhage	Interchangeable with ergotrate
Ergotrate		
penicillin (400,000 S.R.)		I use by the bushel
Aureomycin		
sulfadiazine, oral and i.v.	emergency treatment of meningitis among other things	
B.A.L.	fulminating heavy metal intoxication	Don't see much use for it.
sodium nitrite	for cyanide poisoning	Don't see much use for it.
apomorphine	will empty stomach rapidly in suicide attempts or accidental poisonings.	Often wished I had some with me. . .
vitamin K	some bleeding problems.	Included in my bag. . .
nicotinic acid amide		
50 cc 50% dextrose		Should be carried. . . .
calcium gluconate	tetany	Carry. . . .
unit of albumin (or dried plasma)	for shock	
sterile water		Carry. . . .
sterile saline		Not necessary. . .
procaine HCl, 2%		Prefer 1%. A wonderful drug that will make many friends. I use this for desensitizing trigger points in muscle and facial pains. Use i.v. amytal as antidote for reactions — I have had two, both non-fatal
ether	emerg. anaesthesia	I just carry alcohol. . . .
ethyl chloride spray		I just carry alcohol. . . .
Merthiolate		I just carry alcohol. . . .
alcohol 70%		
Thephorin ointment	allergies	
boric acid ointment	burns	
ophthalmic ointments (several varieties) and in the ice box at home and office		
insulin		
gamma globulin		
Lipo-adreno-cortical extract		

Dr. Weihe: I would add to this list: Benzedrine, liver extract (must treat some of the PA's at home), testosterone, sodium iodide (for cardiac and bronchial asthmas), progesterone with estrogen (for threatened abortion), estrogen, vitamin B. complex (I use this plus i.v. calcium gluconate for post-influenzal debilitation. Patient experiences a flush, then usually feels much better). Mapharsen (resistant trench-mouth), and Depropanex (a smooth muscle relaxant). Many of the drugs listed by Dr. Vorhaus are not immediately necessary for house calls, and are best prescribed rather than dispensed. In this way, better rapport is established with the druggist and he is less apt to counter-prescribe. This also eliminates more bulk from the doctor's bag.

Dr. Theodore R. Sherrod, Instructor in Pharmacology: On pharmacologic grounds, I would question the inclusion of Coramine in this list. Although it acts as a powerful analeptic in the normal animal, it proves ineffective when the circulation and respiration of the animal is depressed. On the other hand, I believe that tetanus antitoxin should also be included in the list.

Dr. Best: I wonder if it might not be wise to carry some of the larger and infrequently used items in a separate bag which can be kept in the

trunk of the automobile. Emergency splints for instance might form a part of such "staple equipment".

Dr. Vorhaus: Dr. Best's suggestions bring us back to our introductory remarks that what you actually place in your bag will depend on the specific needs of your own practice. Dr. Sherrod's comment makes it clear, furthermore, that its contents might be modified by the advancing knowledge and changing trends of medicine itself so there will always be a gap between the "perfect" bag and the bag in use, and the physician's wisdom will have to bridge it.

NARCOSYNTHESIS — An Invaluable Psychiatric Technique

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It is the professional responsibilty of the physician in the practice of general medicine, upon referring a patient into a specialized field of medicine, to be interested in the specific procedure that the specialist indicates is necessary for that patient.

There are several fields of specialized medicine, such as surgery and obstetrics, wherein the physician can participate directly in the specialized procedure in conjunction with the consultant. However, there are other fields of medical specialties, such as psychiatry, in which the general practitioner is willing to accept a basic knowledge of the techniques that are involved and allow the direct management of the case in its entirety to the psychiatrist. Thus, correspondingly, it is the professional responsibility of the physicians in the specialties of medicine to keep the general practitioner abreast of all modern techniques at their disposal.

In the field of psychiatry, much has been written to popularize the techniques of the convulsive shock therapies, electric and insulin, and also psychotherapy. However, we feel it would be extremely valuable to the general physician to be equally familiar also with narcosynthesis, and it is the purpose of this paper to describe this technique and to demonstrate its exceptional value as a psychiatric procedure.

The earliest use of various anesthetic agents in some applied form as psychiatric aids has been described historically by Moore[1] and Beecher[2]. The use of specific barbiturates, namely sodium pentothal and sodium amytal, for narcosynthesis has been traced chronologically to its present status as described recently by the author[3].

The term "narcosynthesis" refers to the technique of the use of an intravenous injection of a barbiturate, preferably sodium pentothal or sodium amytal, to artificially induce a state of seminarcosis and relaxation that precipitates in the diminished control of the patient's mental processes for the specific purpose of obtaining an uninhibited state of mental content; and, to facilitate in the psychiatric interpretation and analysis of the subject matter thus elicited.

Narcosynthesis serves a dual purpose in that it is diagnostic as well as therapeutic. Diagnostically, it is valuable in discovering a possible psychogenic basis for an illness by distinguishing between irreversible structurally determined disorders and functional disorders of organ systems; it aids in establishing the underlying psychodynamics, as well as in organizing a complete, uninhibited history. Therapeutically, narcosynthesis allows the patient complete relaxation, shortens the period of psychotherapy, establishes more rapidly and firmly the rapport

between psychiatrist and patient, enables the patient to accept and assimilate interpretations of his basic conflicts, and aids the patient in the ultimate process of the synthesis.

The two drugs principally used in narcosynthesis are sodium pentothal and sodium amytal. Sodium amytal has its greatest value in cases where sleep is desired following the interview, such as in hospital procedure and in prolonged narcosis. The drug of choice for office procedure is sodium pentothal, since it has a shorter induction period, and the duration of the effect is less prolonged. The effects of sodium pentothal wear off quickly so that psychotherapy may be continued in immediate sequence, and thereafter discussed with the patient in the wakened state.

Both drugs require between 0.25 and 0.5 grams as the effective dosage, although it must be emphasized that the amount administered is strictly an individual affair. Many patients may require larger doses, and we consider up to 1.0 gram within the normal range.

Since sodium pentothal is the drug of choice for office procedure, we are describing the specific technique of its preparation and administration as previously reported by the author[4]. The technique of preparation is to use the 7½ grain vial (0.5 grams) and dilute with 10 cc. of distilled water to make a 5% solution. Other variations of sodium penthothal and distilled water can be made to yield either stronger or weaker solutions. However, the above mentioned technique seems to apply to office procedure most conveniently. Sodium pentothal solutions are not stable; and for this reason only freshly prepared solutions, not over 48 hours old, should be employed. A solution that is not absolutely clear should be discarded.

The patient is placed in a relaxed, reclining position, preferably in a semi-darkened room. The drug is injected into the anticubital vein at the rate of 0.06 grams or 1 grain per minute. It is most important to inject slowly. This feature o fthe use of the drug cannot be overemphasized, since a violation can prove fatal. The patient is asked to count backwards from 100 slowly and aloud. When the speech becomes changed, such as thickened, slowed and confused, the injection is discontinued.

The patient usually speaks spontaneously and is allowed to continue. However, often the therapist may suggest topics which he feels are essential in the patient's history. Narcotherapy is performed by the therapist by taking an active part, by giving stimuli, reassurance and support, and thus lessening the patient's anxiety. When the influence of the drug has worn off the psychiatrist reviews with the patient the foregone happenings.

The outstanding indications for the use of narcosynthesis are anxiety states and hysterical reactions. In the psychoses, narcosynthesis can be used to evaluate the diagnosis, and can be used in conjunction with other psychiatric therapies; but, should never be used to replace other necessary and indicated treatment specific for the psychoses.

In conclusion, since it is the constant aim in the field of psychiatry to employ all techniques that offer the greatest opportunity to understand and treat the patients to the best of our ability, we have here submitted a procedure that has proven to be of invaluable aid as a psychiatric technique.

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CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Lymphedema of the Lower Extremities

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This 37-year-old, white male was first admitted to Cook County Hospital in 1932 (sixteen years ago) when he was told he had a chronic lymphangitis of the left leg. Since then he noticed pain usually in the left groin. This was followed in two months by a diffuse swelling of the left lower extremity. This swelling has persisted and increased since that time, being greater or lesser depending upon the position of the leg. The swelling was worse when he was on his feet. His entire leg from the groin to the toes had become indurated.

His second admission to Cook County Hospital was May 20, 1948. In 1947 he had two Kondoleon operations in the Los Angeles County Hospital. One of the incisions has been draining a lymph-like material since June, 1947. There was no history of previous injury to the leg or filariasis. He has never been out of the country and has been in good health except for the enlarged left leg which has incapacitated him. He had run a continuous low grade temperature, 99° to 99.4° for two years.

From the Department of Surgery, Stritch School of Medicine of Loyola University, Cook County and Mercy Hospitals, Chicago.

His *past history* was negative except for typhoid fever at eight years of age and two Kondoleon operations on the left leg, previously mentioned.

The *physical examination* was essentially negative except for the left extremity. There was diffuse hardness of the inguinal lymph nodes with no tenderness. The entire left lower extremity was markedly enlarged with no pitting edema (Figure 1). There was a draining area on the inner lower part of the leg from one of the previous surgical procedures and scarring. There was three plus pitting edema in the dorsum of the left foot. The impression upon admission was chronic lymphedema of the left lower extremity of unknown etiology. Osteomyelitis of the left tibia was to be ruled out.

Treatment.—Penicillin, 300,000 units daily, was given with elevation of the extremity. Moist Dakin's soaks with Furacin dressings was instituted to offset the low grade infection which was present in the leg. An Ace bandage was applied from the toes to the groin.

Left lumbar sympathetic novocain blocks were given with no results.



Figure 1. Photograph of left lower extremity, showing enlargement due to lymphedema, at time of first operation, June 29, 1948.

Vascular studies revealed deep circulation normal with fairly good left collateral circulation.

Numerous consultations were obtained. One consultant considered the possibility of a high thigh amputation.

The patient was becoming quite disgruntled because of the long hospital stay with no apparent results and with numerous consultations and no uniformity of opinions. At this time the American Medical Association held its annual convention in Chicago and the author visited the scientific exhibit of Dr. Harry B. Macey of the Scott and White Clinic of Temple, Texas, where the treatment of lymphedema of the extremities was presented. This case appeared to be an excellent one for a trial of the Macey procedure.



Figure 2. Photograph showing skin and subcutaneous tissue sutured over split-thickness skin graft.

Operations.—The first stage of the Macey operation was performed on June 29, 1948. A longitudinal incision was made through the skin and subcutaneous tissue down to the fascia from the knee to the ankle (Figure 2). The flaps including the skin and subcutaneous tissue were dissected leaving a large area of fascia exposed. A split-thickness skin graft taken from the thigh of the same leg was then sutured to the fascia and the wound sutured over the graft (Figure 2).

The second stage of the first operation was performed ten days later, on July 9, 1948. At this time the entire skin and subcutaneous tissue was removed over the area covered by the previously placed skin graft. The patient was discharged from the hospital on July 29, 1948. Figure 3 shows the results of the first operation, November 16, 1948, four months postoperative.

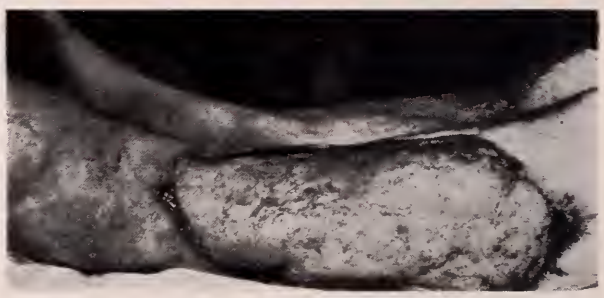


Figure 3. Photograph showing appearance of the left leg approximately four months after the first operation.

The third admission to Cook County Hospital was on November 15, 1948. The first stage of the second operation was performed on November 16, 1948. An incision was made down to the fascia, as described in the first operation, from the ankle to the toes (Figure 4), and a split-thickness skin graft applied (Figure 5). The incision was extended on the medial side of the leg up to the knee and a split-thickness graft applied as before (Figure 6, Figure 7).

The second stage of the second operation was performed ten days later on November 26, 1948, when the skin and subcutaneous tissue was removed from the previously placed skin grafts (Figure 8). A long convalescent period followed due to a large granulating area in the *popliteal* space with infection. The patient was discharged



Figure 4. (left) Photograph showing incision through skin and subcutaneous tissue down to fascia.



Figure 5. (right) Photograph showing application of split-thickness skin graft to fascia on dorsum of foot.





Figure 5, 6 and 7. Photographs showing split-thickness skin grafts on the medial and dorsal surfaces of left leg.



Figure 8. Photograph showing appearance of leg ten days postoperative when the skin and subcutaneous tissue was removed from previously placed skin grafts.

on June 16, 1949, with a much smaller and serviceable leg although approximately one year had elapsed since the first operation (Figures 9, 10 and 11).

The fourth admission to Cook County Hospital was on August 23, 1949, on the orthopedic surgery service for a contracture in the popliteal area. He was operated September 1, 1949 when a contracted scar in the popliteal area was resected to normal tissue and a split-thickness graft applied. His recovery was uneventful and he was discharged on September 13, 1949. He was last seen in January, 1950. There was a slight serous drainage from a small granulating area on the medial side of the leg. He had a serviceable leg, was able to work, and was quite happy over the result.

30 North Michigan Avenue



Figure 9, 10, and 11. Photographs showing anterior, lateral, and posterior views of the leg one year after first operation.

CASE REPORTS



Anaphylaxis From ACTH

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The well established fact that ACTH (Armour) inhibits or blocks the excessive formation of fibroblastic tissue[1,2] regardless of cause, led us to try its use in a case of poliomyelitis which, during the past three years, had undergone four reconstructive surgical procedures. It has also been stated that ACTH renders tissue cells immune to most antigens, either organic or inorganic.[3,4] Since this patient was sensitive to a wide variety of drugs which might have been used to alleviate pain and stiffness, it was felt that ACTH might also be beneficial from this point of view.

The patient was a well developed white male 43 years of age who contracted acute anterior poliomyelitis in October 1947. He developed a complete paralysis of both upper extremities and also a partial paraylsis of the left diaphragm. During the following year he had some return of function in the hands, wrists and right shoulder. In 1949 a flexorplasty of both elbows and a left shoulder arthrodesis was performed and on July 15, 1950 the left ulnar nerve was transplanted because of the formation of large adhesions between the nerve and the bone in the region of the elbow. Since January 1950 there has been constant complaints of pain and stiffness in the left shoulder girdle and in the joints of the upper extremity. The previous history of this patient is noteworthy in that in 1946 he had been incapacitated because of an acute rheumatoid arthritis which involved all his joints. While in the hospital in December 1949, he was given intravenous procaine for the alleviation of pain but was unable to tolerate the entire dose because of the onset of a mild reaction. He is known to be sensitive to morphine, codeine, novocaine and many of the barbiturates. In June 1950 a course of Cortisone was given, (two grams) without any appreciable change in the pain or stiffness.

At a recent conference on ACTH-Cortisone,[5] it was advised that the drug be given with novocaine to alleviate the pain of injection; consequently on Aug. 23, 1950, 12.5 mg. ACTH in 1.0cc of 2% novocaine was given intramuscularly. Within ten minutes the patient began to complain of a vertigo and a feeling of faintness. During the next few minutes there appeared a marked flush of the entire body ac-

companied by a severe burning and itching sensation which began in the scalp and progressed distally over the body. The sclera became markedly congested. There was difficulty in breathing and swallowing and a complaint of a severe sharp pain at the base of the left side of the neck and in the epigastrium. An edema of the eyelids and hands developed. The pulse rate increased to 120 and the blood pressure fell to 96/70. The patient was very apprehensive and had difficulty in lying down because of the pain in the neck and the difficulty in breathing. 100 mg. Benedryl and 5.0cc Coramine were given. The reaction began to subside within an hour. The blood pressure rose to 120/80 and the pulse was 88. Another 50mg. Benedryl was given 4 hours later. The neck pain as well as an aching and stiffness of all joints lasted for about 24 hours.

It was felt that this reaction was due to the novocaine used as the diluent, although, he had never experienced such a reaction. However, since ACTH is a protein and since this patient was sensitive to a variety of antigens, the possibility that some of this reaction might be attributed to the ACTH could not be overlooked. A scratch and patch test with novocaine and novocaine plus ACTH gave negative results. On the following day .03cc of 2% novocaine was injected intradermally and within 3-4 minutes a large wheal with numerous pseudopods was produced. A similar amount of a solution of ACTH in distilled water (10 mg. per cc) was also given intradermally. The ACTH produced a 3 plus reaction within 3-5 minutes. It was now felt that the reaction on the previous day had been produced by the combination of two allergens and that desensitization would be necessary before ACTH could be used in therapeutic doses. At 12:00N 2 mgs. ACTH in distilled water was given intramuscularly. In about 30 minutes the patient complained of a slight vertigo, faintness and nausea which lasted for about an hour. At 4:00PM he was given 4 mgs. intramuscularly which during the next 30 minutes produced no reaction. At 4:30PM an additional 2 mgs. was administered. Within 10 minutes the patient again complained of vertigo, faintness, difficulty in breathing and swallowing, pain in the neck and epigastrium and a severe generalized pruritis. There was no change in the blood pressure and pulse. Again 100 mg. Benedryl was given orally. This reaction lasted about one hour except for the pruritis which persisted for about 18 hours. No further ACTH was administered that day. On Aug. 25th the manifestations of the above reaction had entirely disappeared and the patient was given 4 mgs. at 9:00AM and another 4 mgs. at 12:00N. No further reactions occurred. He was then placed on a six hour schedule and at 6:00 PM was given 6 mgs. ACTH without reaction. The dosage was then increased by 2 mgs. each day until therapeutic dosage was reached. A very mild reaction consisting of vertigo and nausea was produced when the dosage reached 10 mgs.

This case revealed a sensitivity to ACTH and novocaine which responded to antihistiminics therapy and which was then desensitized by increasing amounts of ACTH at frequent intervals. Sensitivity tests to ACTH and the diluent should be made in all cases before instituting therapy and especially if second courses of the drug is given, since reactions may be more frequent after a lapse of therapy.[6]

In our experience ACTH gives but little pain when dissolved in distilled water which is in direct contrast to statements made in the recent ACTH-Cortisone conference.

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Subacute Bacterial Endocarditis and Diabetic Coma with Full Recovery

A. W. Wise, M.D. and Paul Powell, M.D.
Rock Island

Mrs. T. G., a white female aged 45 was admitted to St. Anthony's Hospital in a comatose condition. This patient had been ill approximately six to eight days with apparently a "flu" like syndrome, which began with a temperature of 101 to 102 and generalized aching. The patient was put to bed and symptomatic treatment was given at that time by one of us (P. P.). Further history shows that the patient had been feeling rather loggy and tired and rundown for the last two months before becoming ill with the above non-specific type of infection. She gradually became more and more drowsy and on entering the hospital was in a definitely stuporous condition. There is a past history of diabetes mellitus but the patient apparently was controlled on diet and had not been taking insulin. There has been also, a history of rheumatic fever at the age of eight, with a known type of rheumatic heart lesion following this.

Physical examination at the time of entrance reveals a white female, apparently very acutely ill, she is in a moderately deep coma and cannot be aroused by external stimuli. Examination of the head showed no bumps or masses, the ear-nose-throat examination was entirely normal throughout. The pupils reacted to light and the eyes were rather fixed and did not move readily. The neck showed a moderate degree of stiffness, there was no enlargement of the thyroid and no glands were noted. The lungs were clear to percussion and auscultation. The heart was at the upper limits of normal in size, the left border being just to the anterior axillary line. Apical systolic and pre-systolic murmurs are heard. The blood pressure is 110/76, the pulse rate is 124. The abdomen is somewhat distended, but not tender and no masses or solid organs are felt. The extremities show a 1 plus edema of the lowers. Pelvic examination showed the uterus to be of normal size and position, the adnexa were not enlarged and the cervix appeared clear.

Laboratory work showed the blood sugar to be 488 mgm %, the CO_2 combining power was 24 volumes %. The serum potassium was 15 mgm per 100 cc of blood. Urinalysis showed a faint trace of albumin, and 4 plus sugar, 2 plus acetone and diacetic acid, white blood cells 3 to 5 per HPF, red blood cells none, cast none. The blood count showed 2,500,000 red count, 16,450 whites and 7 grams of hemoglobin per 100 cc of blood. The differential showed 87% polys and 10% lymphocytes. There was one degenerated cell and 2% eosiniphils. No evidence of malarial parasites could be seen in the smear. Blood was drawn for a culture.

The patient was put on a regime for diabetic acidosis and coma, large amounts of intravenous saline were given. Approximately 3000 cc being given in the first 14 hours. The patient was given 50 units of regular insulin intravenously and 100 units of regular insulin subcutaneously at the time of admission. A Wangensteen suction was inserted and the stomach was washed out. A retention catheter was also inserted and urine specimens were run every two hours and regular insulin given according to the color of the urise test on Benedicts reagent.

Approximately 12 hours after entering the hospital the patient appeared somewhat more awake and responded to questioning. At that time she developed what appeared to be a left hemiplegia and a severe hyperthermia. The temperature went up to 106.8 and remained that way for approximately 8 hours. This temperature was controlled by ice packs, wet towels, and electric fan, and gradually was reduced to approximately 102. Temperature varied between 102 and 103 for the next 10 to 14 days.

At that time a return on the orginal blood culture showed a definite growth of streptococcus viridans in the blood stream. A diagnosis of subacute bacterial endocarditis which had been entertained before was definitely made by the above findings, together with the clinical findings

of a mitral heart lesion, fever, and embolic phenomena. At this time several areas of bleeding were noted in the conjuntiva which were recognized as petechial hemorrhages. No clubbing of the fingers could be made out, the spleen was not palpable at all throughout the course of the entire disease. The patient was put on large doses of penicillin and was given approximately a million units a day intramuscularly in divided doses over the next fourteen days.

During this regime the blood sugar was controlled and the temperature gradually settled down to a base of approximately 99 throughout the majority of the stay. The patient appeared well, ate well, and seemed to be progressing in a normal manner. After 14 days the penicillin was cut down to approximately 500,000 units a day. This was kept up for another 10 days and the patient was finally discharged 28 days after entering the hospital, with an apparent cure.

She left the hospital on a dosage of insulin of 50 units of protamine daily and a diet consisting of 180 grams of carbohydrates, 90 grams of protein, and 90 grams of fat. She has continued to do fairly well until this time, which has been approximately a year. She still has a moderate degree of residual weakness in the left arm and leg, but has very little trouble with this and gets around quite well, doing her housework daily,

In conclusion, this case may be summarized as a patient with a known type of rheumatic heart disease with combined mitral stenosis and insufficiency and diabetes mellitus. She entered the hospital in a diabetic coma due to a superimposed subacute bacterial endocarditis, while in the hospital she suffered a cerebral embolism, giving an entire left hemiplegia which has apparently cleared. The patient apparently had a complete recovery and definite cure of the bacterial endocarditis by the use of penicillin.

502 Safety Building

LET'S SETTLE THIS PROBLEM NOW

. . . I wonder how many of us ever realize that big business is spending millions each year teaching young people how to create better public relations with the firms for which they are working. Let us look at a concrete example of what is taking place:

Not long ago I called at a doctor's office where two doctors are working as partners. I asked for Dr. X. The reply of the office girl was that he was not in.

I said, "Where Is he?"

"I don't know."

"When will he be back?"

"I don't know."

"Are these his office hours?"

"Yes, but he isn't here."

"Is there anyone else waiting to see him?"

"Yes; there are six people waiting to see him."

"Have you any idea when he will be back?"

"I don't know."

Well, I thought, I'll ask for Dr. B.

"He isn't here, either."

"When will he be back?"

"I don't know."

"Have you any idea where I might find him?"

"I haven't the slightest idea where he is."

Now, to me this conversation did not create good public relations. I am sorry this happened in Wisconsin, so I can't say that is the kind of office girls they have in Illinois or over in Minnesota. *Excerpt: The Future of American Medicine, by H. H. Christofferson, M.D., Colby, Wis. M. J., Nov.* 1950.

PATHOLOGY CONFERENCES

EDWIN F. HIRSCH, DEPARTMENT EDITOR



PRESENTATION OF THREE CASES

EDWIN F. HIRSCH, M.D.
St. Luke's Hospital
CHICAGO

SYPHILITIC AORTITIS WITH CARDIAC DECOMPENSATION

This negro dentist in March 1942, then at the age of 57 years, entered St. Luke's Hospital in the care of Drs. T. Coogan and J. Davis because of cardiac decompensation. According to the clinic record he had had gonorrhea and syphilis, the latter never having been treated adequately. The heart was enlarged to the left, and had a thrill and a diastolic murmur over the aortic area. The rhythm was irregular and the blood pressure was 176/72 mms. of mercury. The erythrocytes were 4,350,000 and the leucocytes 17,950 per cu. mm. The urine contained 30 mgms. per cent of albumin and a few red blood cells and leucocytes. The Wassermann test of the blood and of the spinal fluid was negative but a diagnosis of latent syphilis was made. He received injections of typhoid bacilli with temperature elevations as high as 104.4°F. and after a series of these treatments was discharged on the 21st day in the hospital. His second admission was in July 1946 because of nocturnal paroxysmal dyspnea which had been present for a year. The physical findings were essentially the same as those present at his first admission. His blood pressure was 160/80 mms. of mercury. The right pupil reacted more sluggishly to light than the left and there was about 25 per cent loss of visual acuity in both eyes. An electrocardiogram had changes that suggested coronary artery disease and roentgenograms disclosed an enlarged heart and calcification of the aortic arch. The non-protein nitrogen of the blood was 41.4 mgms per cent. He was in the hospital for seven days with the diagnosis of syphilitic aortic regurgitation. His final admission was on March 21, 1950. He entered the hospital comatose and cyanotic. His blood pressure was 150/80 mms. of mercury. The pulse was 120 per minute and the rhythm was irregular. He had a to-and-fro aortic murmur and rales were heard at the base of both lungs. The erythrocytes were 4,380,000 and the leucocytes were 21,700 per cu. mm. The urine contained 85 mgms. per cent of albumin. For a week his temperature rose to 103.2°F. returning to normal within the same 24 hours. His pulse ranged

between 80 to 120 and the respirations to 30 per minute. Signs of cardiac decompensation remained and the lungs had increased tactile fremitus and rales. At times he was irrational and his heart was fibrillating. On the sixth hospital day the non-protein nitrogen of the blood was 94 mgms per cent. The urinary output had decreased and he was delirious. The liver was palpated 7 cms. below the costal arch. The patient remained disoriented. There were temporary improvements in the urinary output and the function of the heart. The non-protein nitrogen of the blood decreased slightly to 79 mgms per cent on the eleventh hospital day but on this day he suddenly died, while eating lunch. The clinical diagnosis was luetic heart disease and luetic aortitis with aortic insufficiency.

The anatomic diagnosis of the necropsy (trunk) included the following essentials:

Marked hypertrophy, focal fibrous scars, fatty changes and cloudy swelling of the myocardium of the heart;

Dilated left ventricle of the heart;

Saccular aneurysm of the arch and ascending portion of the aorta;

Marked calcified and ulcerated atherosclerosis of the aorta and its main branches;

Chronic fibrous changes of the leaflets of the aortic, mitral and tricuspid valves of the heart;

Atherosclerosis of the coronary arteries;

Atherosclerotic narrowing of the ostium of the right coronary artery of the heart;

Hydropericardium;

Hypostatic edema, hyperemia and large recent hemorrhagic infarcts of the lungs;

Blood clot emboli of the branches of the pulmonary artery to the middle lobe of the right lung and to the lower lobe of the left lung;

Obturator thrombosis of the right femoral vein;

Bilateral fibrinous pleuritis;

Hydrothorax;

Ascites;

Chronic passive hyperemia and fatty changes of the liver;

Chronic passive hyperemia and old infarct of the spleen;

Nephrosclerosis and passive hyperemia of the kidneys, etc.

The body of this elderly negro weighed 125 pounds. The abdomen contained approximately 800 ccs. of clear yellow fluid. The small, firm and elastic spleen weighed 130 grams and had an old infarct 4 cms. in diameter. The lower margin of the right lobe of the liver extended 8 cms. below the costal arch. The liver weighed 1470 grams, had thin capsular opacities of the right lobe and the changes of a chronic passive hyperemia. Each pleural space contained approximately 150 to 200 ccs. of a yellow fluid, and the lung on each side had scattered fibrous adhesions to the chest wall. The heart in its position in the body was large, at the base 12.5 by 10.5 cms. and from the base to the apex 13 cms. The lining of the pulmonary veins was smooth. The lining of the pulmonary artery had moderate fibrous and fatty changes. The leaflets of the pulmonic valve were thin and the ring had a circumference of 7 cms. The length of the right ventricle from the attachment of the pulmonic leaflets to the apex was 8 cms. and from the tricuspid ring to the apex was 6 cms.; the myocardium of the right ventricle measured near the septum in front was 10 mms. thick. The foramen ovale was closed. The circumference of the tricuspid ring under slight tension was 13 cms., the leaflets had slight fibrous changes. The lining of the dilated left auricle, auricular appendage and left ventricle was smooth. The mitral ring under slight tension was 11 cms. in circum. The leaflets of the mitral valve had marked fibrous changes that extended into the chordae tendineae. The chamber of the left ventricle was appreciably dilated. From the mitral ring to the apex it was 7 cms. and from the attachment of the aortic leaflets to the apex it was 8.5 cms. The ostium of the right coronary artery was 4 mms. in dia., that of the left was 3 mms. in dia. The circumference of the aortic ring under slight tension was 7.5 cms. and the leaflets had marked fibrous thickenings but no fusion of the commissures. The myocardium of the left ventricle measured along the septum behind at several levels was 1.5 to 1.7 cms. thick. Surfaces made by cutting the myocardium of the lateral wall had a tan-brown, fibrillar tissue with small grey scars, a moderate cloudy swelling and slight fatty changes. The septal myocardium was similar but had more of the fatty changes and small grey scars. The lining of all portions of the aorta had marked fibrous and fatty changes with extensive calcification and numerous soft atheromas and ulcers. These



Figure 1. Photograph illustrating the marked calcified sclerosis and saccular aneurysm of the arch of the aorta, the scarred aortic leaflets, the dilated left ventricle and the myocardial hypertrophy of the heart.



Figure 2. Photograph illustrating the marked sclerosis and ulcerated atheromas of the thoracic and abdominal portions of the aorta.

changes encroached upon the orifice of each coronary artery. The ascending portion of the arch had a saccular aneurysm with an inside circumference of 10 cms. The lining of this was roughened by fibrous tissues with marked calcification. (Figures 1 and 2) The heart with 9 cms. of attached aorta and 3 cms. of the pulmonary artery weighed 610 grams. The right kidney weighed 142 grams, the left 132 grams. The cortex of the kidney at the base of the pyramid was 10 mms. wide and the corresponding pyramid had a height of 15 mms. The red brown capsular surface was coarsely granular. There were no unusual changes in the

lining of the esophagus, stomach, small bowel, colon, rectum, urinary bladder and testes. The prostate was moderately enlarged with glandular hyperplasia. The lumen of the right common iliac vein had an obturator thrombus that completely filled the channel, traced into the femoral vein. The edematous and hyperemic right lung weighed 720 grams. The pleura was smooth except for deposits of fibrin opposite the upper part of the lower lobe posteriorly, and beneath this was a recent infarct 13 cms. in diameter. A branch of the pulmonary artery with a diameter of 10 mms. contained a blood clot embolus 4.2 cms. long and 7 mms. in diameter. In the upper portion of the upper lobe was another recent infarct 9 cms. in diameter. The left lung weighed 480 grams. The tissues of the lower lobe were markedly hyperemic and consolidated. In the lumen of a branch with a circumference of 12 mms. and leading to the lower lobe was a blood-clot embolus 3.5 cms. long and 2 mms. in diameter and here was an infarct about 6 cms. in diameter. The remaining portions of the lung tissues were markedly hyperemic and edematous. Histological examinations of the heart demonstrated numerous fibrous scars in the myocardium and hypertrophy of the muscle fibers. The aorta had a marked fibrous tissue thickening of the intima edge and infiltrations of lymphocytes and tissue crevices where lipids had been dissolved. The media had focal scars with destruction of the elastic fibers and leucocytic exudates. About the vasa vasorum were small infiltrations of lymphocytes and plasma cells. Sections stained for elastic fibers demonstrated scar tissue replacement of these tissues in the media and fragmentation of those disrupted in the scar tissues. The changes of the viscera otherwise were essentially those of a chronic passive hyperemia, and in the kidneys a marked nephrosclerosis.

COMMENT

The symptoms of the illness in this patient are those of cardiac dysfunction, at times severe and disabling. The history of a syphilitic infection is significant when related to the cardiac enlargement, the aortic thrill and murmur, and the dilitation with calcification of the aortic arch. Syphilis attacks especially the thoracic portion of the aorta and the effects are serious to cardiac functions when the first portion of the arch is scarred, the aortic ring dilates, or the commissure of the leaflets are distorted and the valve become incompetent. Aortic insufficiency results and cardiac decompensation follows in grades of severity. In this patient the aorta had also marked atherosclerosis and further circulatory complications appeared terminally with thrombosis of the right iliac vein and pulmonary embolism.

RUPTURED SACCULAR ANEURYSM OF THE ARCH OF THE AORTA

A white male aged 57 years entered St. Luke's Hospital in the care of Doctor G. deTakats on March 13, 1950. A month before he had been in this hospital for the treatment of a large aneurysm of the descending portion of the aorta which had eroded two ribs on the right side. He had known of this mass in the chest for about two years. During this time he had had several courses of treatment with bismuth and penicillin, but the serological tests for syphilis remained strongly positive. The aneurysm during his first hospital stay was wired. When he returned after a month the aneurysm had increased about three times in size and he had severe pain in his chest. The erythrocytes of the blood were 4,000,000, and the leucocytes 10,600 per cu. mm. Nine hundred ccs. of a straw colored fluid were removed from the right pleura, and the I to IV intercostal nerves were infiltrated with alchol for the relief of pain. On April 8th his systolic blood pressure suddenly fell to 70 mms. Hg. and death occurred shortly afterwards.

The essentials of the anatomic diagnosis of the necropsy (complete) are:

Ruptured saccular aneurysm of the arch of the aorta;

Aneurysm erosion of portions of the I to IV right ribs and sternum;

Large recent hemorrhage into the right side of the chest;

Syphilitic atherosclerosis of the aorta and its main branches;

Marked compression atelectasis of the right lung, etc.

The body weighed 115 pounds. The front of the chest had a swelling 14 by 15 cms. and elevated 8 cms. which began just below the right clavicle, and reached from the right anterior axillary line to 3 cms. beyond the midline. The skin



Figure 3. Photograph illustrating the aneurysmal erosion of the sternum and the I-IV right ribs.



Figure 4. Photograph illustrating the large ruptured aneurysm and the syphilitic scars of the arch of the aorta.

stretched over this had four ulcers, the one above, 1 cm. in dia., extended into the thorax. Beneath the skin was a quantity of clotted blood and exudates confined in two pockets, 5 by 3 cms. and 2 by 2 cms. In the larger was a piece of steel wire 11 cms. long. The diaphragm on each side was depressed. Large portions of the I to IV right ribs and the adjacent tissues of the sternum were eroded, (Figure 3) making a circular defect here 12 by 14 cms. which was filled with soft red and grey blood clots. The right lung was collapsed by pressure, covered with fibrin, and here were about 1500 ccs. of a blood stained fluid. Projecting to the right side from the superior mediastinum were soft grey and red blood clots together 12 by 9 by 9 cms. The pericardium contained a small amount of clear yellow fluid. The lining was smooth. The collapsed right lung weighed 450 grams, the hyperemic edematous left lung weighed 760 grams. The valvular structures of the heart had no significant changes except a fibrous thickening of the leaflets of the aortic valve. The myocardium was not unusual. However, the aorta, beginning at its root had marked linear scars and atheromatous plaques. Six centimeters above the attachment of the aortic leaflets in the arch of the aorta was a circular opening 4 cms. in dia. which communicated with the large mass of blood clots mentioned. (Figure 4) It also contained 70 cms. of a fine, coiled steel wire. A true aneurysmal wall beyond the opening could not be traced but the lining tissues of the opening had marked sclerosis. No pertinent changes were in the other viscera of the body.

COMMENT

Pressure erosion of the bone structures of the chest by a large thoracic aneurysm of the aorta is common. Preventing an increase in the size of such a lesion is a major problem. The dangers to patients with these aneurysms are spontaneous rupture with death from internal or external hemorrhage, and infection with subsequent rupture. The latter happened in this patient. While rupture of an aneurysm of the arch of the aorta to the outside or into a pleural space is usual, occasionally the rupture is into the pulmonary artery. Unless the pulmonary artery is exposed fully during the postmortem examination this erosion into the artery will not be found.

EXTENSIVE TUBERCULOSIS OF THE URINARY SYSTEM AND SUPRARENAL GLANDS (ADDISON'S DISEASE)

A white male, aged 56 years, entered St. Luke's Hospital in the care of Doctors T. Coogan and T. Grauer for the twelfth time on July 14, 1950 because of weakness, nausea and vomiting. He was known to have genitourinary tuberculosis since 1947. Pain in the left kidney region, fever, malaise, and a cough had been present four years before that time. In 1947, two months after acid-fast organisms were found in the urine, his left testicle became swollen and painful, he had nocturia and dysuria, pain in both flanks and attacks of hematuria. The left testis was incised and drained. Later a draining sinus formed in the incisional scar of the scrotum. In 1948 he received streptomycin. This was given again later and also terramycin and choramycetin. Diarrhea and weakness developed in 1949 and the diagnosis of Addison's disease was made. Crises of Addison's disease appeared months before his final admission. When admitted his blood pressure was 110/70 mms. Hg.; the pulse rate was 88 and the respirations 18 per minute. His sensorium was somewhat clouded. The erythrocytes of the blood were 3,450,000 and the leucocytes 6,750 per cu. mm. The urine had quantities of albumin and exudate cells. The non-protein nitrogen of the blood was 148 mgms, the urea 53 mgms., the creatinine 10.1 mgms., the chlorides 460 mgms., the phosphorus 6.5 mgms., and the calcium 10.9 mgms. per 100 cc. The serum sodium ranged between 116 and 130.5 mE/1, the serum potassium 2.9 to 7 mE/1. The management of the patient's illness became complicated by a progressive kidney dysfunction and by the crises of Addison's disease. Despite electrolyte, fluid, antibiotic and hormone therapy the patient grew worse. Edema of the lungs and face developed, the blood pressure dropped to between 94/60 and 50/30 mms. Hg., and death occurred on July 21, 1950.

The essentials of the anatomic diagnosis of the necropsy (trunk) are:

Bilateral chronic caseous and ulcerative tuberculosis of the kidney;

Bilateral chronic caseous tuberculosis of the suprarenal gland;

Bilateral chronic ulcerative tuberculous ureteritis;

Chronic tuberculous urinary cystitis;

Chronic caseous tuberculous prostatitis;

Subacute miliary tuberculosis of the lungs, spleen, and liver; etc.

The body weighed 158 pounds, and the fat tissues in the depots were abundant. Each pleural space had about 150 cc. of a clear limpid yellow fluid, and scattered adhesions bound the lungs to the parietal pleura. The right lung weighed 890 grams, the left weighed 780 grams, and each had many small grey tubercles 1 to 4 mms. (Figure 5) in dia. The heart weighed 400 grams with 2 cms. each of aorta and pulmonary artery. There were no changes of the valve structures and the myocardium. Only a small residue of right suprarenal gland tissue remained, and in its place were several small pockets of caseated tissue, the largest 1 cm. in dia. The left suprarenal gland was less caseated than the right but it was markedly atrophic and only a green-brown tissue remained, 3.5 by 1 by 1.5 cms. Foci of yellow caseous material were in the residues of tissue. Both kidneys were large, the right 14.5 by 8.5 by 7 cms., the left 12.5 by 6.5 by 5.5 cms. The capsule of the right kidney stripped from a grey granular surface with many slightly raised and rounded yellow caseous nodules a few mms. to 1 cm. in dia. (Figure 6). When sectioned horizontally from its convex edge, the pelvis and the major and minor calyces were dilated, the lining was granular, necrotic and the surfaces were stained green, the deeper portions were yellow. These



Figure 5. Photograph illustrating the miliary tubercles of the lungs.

Figure 6. (below) Photograph illustrating the caseous nodules on the capsular surface of the right kidney.



changes extended through the ure'er to the urinary bladder, the wall of the ureter was thickened so that the outside diameter was 1.2 cms. The renal parenchyma ranged in width between 2.5 and 3.5 cms. There was no contrast between the cortex and medulla, only the apex of the pyramids had the usual markings. The kidney tissues otherwise were grey, mottled with red, and had soft yellow regions of caseation necrosis and grey noduels like miliary tubercles. (Figure 7). The left kidney, smaller than the right, had a marked constriction at a level 6 cms. below the upper pole. The capsule of this kidney stripped from a granular grey surface with raised nodules of yellow caseous tissues. A pocket in the upper pole 4.5 cms. in dia. contained semi liquid caseous material. (Figure 8). Otherwise the left kidney and its ureter were like the structures on the right. The lining of the dilated urinary bladdery was granular and covered with grey yellow exudates. The

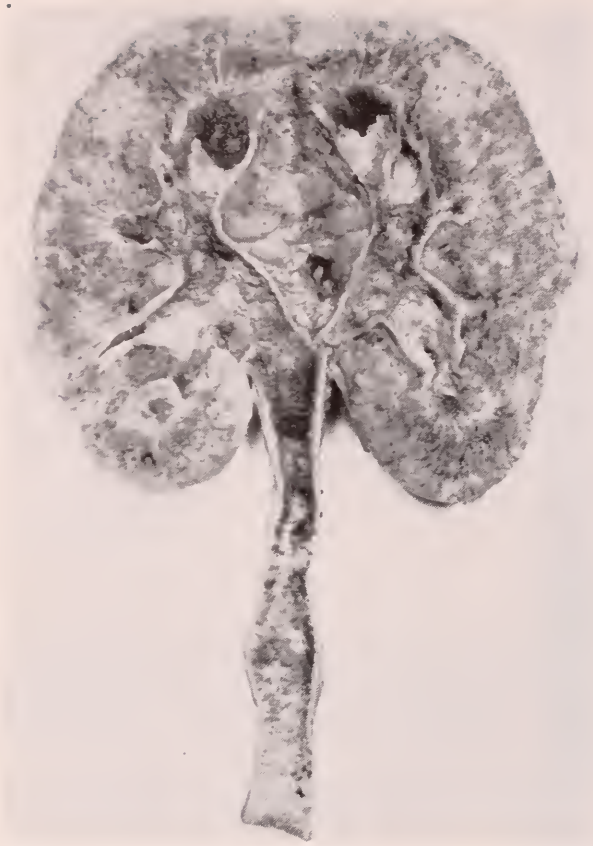


Figure 7. Photograph of surfaces made by frontal hemisection of the right kidney and illustrating the extensive tuberculous nephritis and ureteritis.



Figure 8. Photograph of surfaces made by frontal hemisection of the left kidney and illustrating the marked tuberculous nephritis and ureteritis.

prostate was 4 by 3 by 2.5 cms. and the external surface had nodules 0.5 to 1 cm. in dia. that contained caseous material. The seminal vesicles grossly were not involved. The left testis was atrophic and embedded in fibrous tissues. The liver weighed 1755 grams and had scattered miliary tubercles, the spleen weighed 370 grams and also had miliary lesions. No changes were observed in the stomach, bowel, colon and rectum. Histological examinations of many tissues demonstrated the characteristic lesions of tuberculosis.

COMMENT

Extensive tuberculosis of the kidneys, ureters, urinary bladder, left testis and prostate developed in this patient despite good medical management. Then tuberculous destruction of the suprarenal glands (Addison's disease) occurred, and finally a widely disseminated systemic miliary tuberculosis. The progressive destruction of the kidneys reduced renal functions. The loss of suprarenal gland tissues added the complications of Addison's disease. Each of the disorder was a formidable condition to treat medically, as well as the basic tuberculous infection.

NEWS OF THE STATE



ADAMS

Foundation Officers.—Dr. M. E. Bitter, Quincy, was chosen president of the Swanberg Medical Foundation at a recent meeting. Other officers include Dr. N. S. Davis, Chicago, vice president and Dr. Harold Swanberg, secretary-treasurer. Dr. Frank Benner was named accounting officer.

BOONE

Society Election.—Dr. Adrian Schreiber, Caledonia, was chosen president of the Boone County Medical Society recently, succeeding Dr. Wesley Oliver. Dr. F. W. Ulrich, Belvidere, was elected vice president and Dr. James Ellis was named secretary-treasurer. Dr. M. L. Hartman, Belvidere, was named delegate to the Illinois State Medical Society.

BUREAU

New Officers.—The newly elected officers of the Bureau County Medical Society are Dr. Donald E. Sloan, Princeton, president; Dr. H. J. Jacobs, Spring Valley, vice president; Dr. R. E. Davies, also Spring Valley, secretary; and Dr. K. M. Nelson, Princeton, program chairman.

CHAMPAIGN

Society Election.—Dr. Glenn Fishel, Tolono, was named president of the Champaign County Medical Society recently. Dr. L. T. Gregory, Urbana, was named president-elect and will head the society in 1952. Dr. Arnold Leavitt, Champaign, was re-elected secretary-treasurer. Elected to the executive committee for three years were Dr. Robert M. Hoyne, Urbana and Dr. Carl Greenstein, Champaign; two years, Dr. Gernon Hesselschwerdt, Tolono, and Dr. I. Brill, Champaign; one year, Dr. M. M. Ricketts, Rantoul, and Dr. R. H. Smith, Mahomet.

COOK

Society News.—"Some Factors Leading to Degenerative Disease" was a discussion by Dr. C. Howard Hatcher before the Chicago Rheumatism Society, November 29.

Personal.—Dr. John M. Reichert has been named medical director of the Infant Welfare Society, Chicago.—Dr. Percival Bailey was named chief of research in the state mental hospitals, newspapers reported December 6.—Dr. Henry T. Ricketts was named chaiman of the Institute of Medicine of Chicago and Dr. Walter H. Theobald, president. Other officers are Dr. Charles W. Freeman, vice president; Dr. George H. Coleman, secretary; and Dr. E. Lee Strohl, treasurer.—Dr. Henry E. Swantz, Oak Park, was named head of the local civilian medical defense committee.

Otto Kampmeier Gives Up Administrative Activities.—Dr. Otto F. Kampmeier, head of the department of anatomy, University of Illinois College of Medicine, has requested that he be relieved from administrative duties on September 1, 1951, in order to devote time to the completion of several books, one of which is an atlas of head and neck anatomy. In compliance with his request, Dean Stanley W. Olson has named a committee of five to select a new head for the department of anatomy. Dr. Eric Oldberg will serve as chairman of the committee, members of which are Dr. Stanley W. Armstrong Jr., Dr. Robert E. Johnson, Urbana; Dr. Milan V. Novak and Dr. C. C. Pfeiffer.

Faculty Appointments.—The Chicago Medical School announced the following changes in faculty: Dr. Howard L. Gasner and Dr. Howard M. Seidner, assistants in gynecology and obstetrics; Dr. Marshall U. Simon, instructor in otolaryngology; Dr.

Robert C. Busch, instructor in surgery and Dr. Lawrence Jacques, associate in surgery.

Philip Lewin Named Head of Department.—Dr. Philip A. Lewin, professor of bone and joint surgery, Northwestern University Medical School, has been appointed chairman of the department, President J. Roscoe Miller announced December 11. Dr. Lewin replaces Dr. Paul Magnuson who now is professor emeritus in the medical school. Dr. Magnuson, who joined the Northwestern University Medical School faculty in 1914, was instrumental in organization of the bone and joint surgery department. Dr. Lewin has practiced medicine in Chicago since 1914, and has been a member of the Northwestern medical school faculty since 1918. A graduate of Rush Medical College in 1911, he received postgraduate training at the University of Paris.

Legan Medicine Department Discontinued.—The Department of Criminology and Legal Medicine in the University of Illinois College of Medicine has been discontinued, Dean Stanley W. Olson has reported.

The action was taken following a recommendation by Dr. Sophie S. Sloman, head of the department, that the department be discontinued and its functions absorbed into other departments. Dean Olson concurred in the recommendation, pointing out that the department was not one which could be developed and expanded within the framework of the College of Medicine.

Dr. Olson said that the functions of the department can be adequately taken over by the new Department of Preventive Medicine, by the Department of Psychiatry, and by the proposed Department of Forensic Pathology.

Dr. Sloman has resigned as head of the department, but will retain her University appointment as clinical assistant professor of psychiatry. She also has resigned as superintendent of the Institute for Juvenile Research.

The Department of Criminology and Legal Medicine is an outgrowth of the Department of Social Hygiene, Criminology, and Medical Jurisprudence which was established in the College of Medicine in 1919.

New Series of Lectures on Blood.—A second series of lectures on the blood was launched at the Chicago Medical School, January 17, with a presentation by Dr. Harry D. Diamond, New York, on "Recent Advancements in the Treatment of Leukemias and Lymphomas." Other lectures in the series are January 31, Dr. George J. Scheff, Chicago, "The Spleen—Functional Problems"; February 14, Armand J. Quick, Milwaukee, "The Coagulation Mechanism"; February 21, Dr. Louis R. Limarzi, Chicago, "Bone Marrow Studies—Clinical Application"; February 28, Dr. Steven O. Schwartz, "Hemolytic Anemias" and March 7, Dr. Charles P. Emerson, Boston, "The Separation and Preservation of the Formed Elements and Proteins of the Blood."

Research on Cerebral Palsy.—A new program of basic research designed to uncover an answer to the cerebral palsy problem was inaugrated recently by the University of Illinois College of Medicine.

Funds for the support of this investigative study have been provided by the Cerebral Palsy Association of Illinois through the chairman of its board of directors, John Balaban, and its president, William K. Hollander. The association has allocated $50,000 for a five-year program of research.

The grant was presented by Balaban and Hollander to Dr. A. C. Ivy, vice-president of the University of Illinois in charge of the Chicago Professional Colleges.

The study will be unique inasmuch as primary consideration will be given to the basic problem of the mechanisms at work which produce the symptoms known as cerebral palsy.

Little, if any, consideration has been given to this aspect in the past. Rather, a great deal of emphasis has been placed on the need of nursing care for those afflicted with cerebral palsy, and on the necessary special instruction to physicians in the care of spastic patients.

The study will be undertaken by Dr. S. N. Stein and a team of medical investigators in the University's Department of Psychiatry, headed by Dr. Francis J. Gerty. The program will be conducted in the research laboratories of the Illinois Neuropsychiatric Institute, 912 S. Wood St., which are under the direction of Dr. Warren S. McCulloch.

For the past three years, these investigators have been studying the so-called Parkinson Syndrome, which is believed to be closely related to the cerebral palsy problem.

With the awarding of the grant by the Cerebral Palsy Association of Illinois, the investigators first plan to map out precisely the sites of damage in the brain and the distribution of transmitted impulses from those damaged areas. If this information can be obtained, it is conceivable that new methods can be developed along surgical and medicinal lines to aid the afflicted.

CRAWFORD

Society News.—Dr. Irvin H. Scott, Sullivan, Ind., discussed "Advantages of Medical Practice at the Present Time" before the Crawford County Medical Society in Robinson, December 14.

GREENE

Society Election.—At a recent meeting of the Greene County Medical Society, in Roodhouse, Dr. C. A. Billings, White Hall, was elected president of the society. Other officers elected are Dr. William Garrison, White Hall, vice president and Dr. P. A. Dailey, Carrollton, secretary-treasurer.

HENRY

Society Officers.—Dr. Anne H. Hopwood, Galva, has been elected president of the Henry County Medical Society, succeeding Dr. Thomas B. Carney, retired. She is the first woman to serve in that capacity in the county. Dr. J. C. Williamson, Toulon, was elected vice president and Dr. Fred Stewart,

Kewanee, secretary-treasurer. Dr. Hopwood, a Galva physician for seven years, has served as secretary of the staffs of the Kewanee Public and St. Francis Hospitals. She is now secretary of the Kewanee Public Hospital staff.

JEFFERSON

Medical Director Named to New Sanitarium.—Dr. Isadore Zapolsky, Elgin, has been appointed medical superintendent of the Mt. Vernon State Tuberculosis Sanitarium which is to open early this year. Dr. Zapolsky graduated from Northwestern University Medical School in 1929. He was a staff physician at the Chicago Tuberculosis Sanitarium for thirteen years and served in the U. S. Army Medical Corps. Since March, 1948, he has headed the tuberculosis unit of the Elgin State Hospital.

KANKAKEE

Personal.—Dr. Ralph Major has been named city health officer of Momence to succeed the late Dr. Charles H. Ruch.

KNOX

New County Officers.—New officers of the Knox County Medical Society were elected at a meeting in Galesburg, November 16. They are as follows: Dr. F. M. Huff, president; Dr. J. P. Graham, vice president; Dr. Alexander M. Duff Jr., secretary-treasurer; Dr. J. C. Redington, delegate to the Illinois State Medical Society; and Dr. Crosiar G. Bower, alternate, all of Galesburg. Dr. John H. Glynn, Chicago, technical director of Armour Laboratories, discussed "ACTH" at the meeting.

MACON

Society Election.—At a recent meeting of the Macon County Medical Society, the following officers were elected: Dr. D. F. Loewen, president; Dr. I. H. Neece, president elect; and Dr. Maurice D. Murfin and Dr. Ferris D. Highsmith, reelected secretary and treasurer, respectively, all of Decatur.

MADISON

Society Officers.—Dr. Gordon F. Moore, Alton, was recently elected president of the Madison County Medical Society, succeeding Dr. W. E. Delicate, Edwardsville. Other officers elected were Dr. W. W. Brown and Dr. Eugene F. Moore, both of Collinsville, vice president and secretary, respectively; and Dr. Cecelia Hellrung, Edwardsville, treasurer. Dr. E. H. Theis, Granite City, was named medical legal member and Dr. Delicate was appointed to the board of censors. Serving with him on the board are Dr. Maurice Williamson, Alton, and Dr. H. M. Cravens, Collinsville. The election of officers followed with a talk by Dr. Johann Leopold Ehrenhaft, Iowa City, associate professor of surgery, State University of Iowa College of Medicine, on "Surgical Lesions of the Chest in Children."

Personal.—Dr. L. D. Archer became president of the medical staff of Wood River Township Hospital, January 9. Other officers are Dr. L. L. Baker, vice president; Dr. W. J. Reuter, Bethalto, secretary-treasurer. Named to the executive committee were Drs. Archer, Reuter, Thomas Kelly, Maurice Wohl and W. V. Roberson. Named to the credentials committee were Drs. Archer, Reuter, E. R. Quinn, H. S. Mendelsohn and B. L. Roberson.

New Officers of Hospital Staff.—Dr. James D. McCloskey was elected president of the medical staff of St. Joseph's Hospital, December 12, succeeding Dr. G. A. Rawlins. Other officers elected were Dr. Donald S. Bottom, vice president and Dr. Henry Halley, secretary-treasurer.

MC DONOUGH

Personal.—Dr. Richard Franck, Bushnell, was chosen president of the medical staff at St. Francis Hospital in December. Dr. Eric E. Wisshack, Macomb, was named vice president and Dr. Olin A. Dively, also Macomb, secretary-treasurer.

PEORIA

Personal.—Dr. Dan Morse, superintendent of the Peoria Municipal Tuberculosis Sanitarium, was elected president of the Peoria Academy of Science, December 13.

Society Election.—New officers named recently by the Peoria Medical Society include Dr. Clifford P. Strause, president; Dr. Carl E. Sibilsky, president-elect; and Dr. Carl F. Neuhoff, reelected secretary-treasurer. Dr. Charles D. Sneller is the retiring president. Members of the advisory council named were Dr. Clarence A. Magaret, reelected, and Dr. Joseph Belsley. Delegate to the Illinois State Medical Society is Dr. Elliott P. Burt, with Dr. William A. Michael, alternate.

PIKE-CALHOUN

New Officers.—The Pike-Calhoun Medical Society recently elected Dr. Jack M. Bailis as the new president, with Dr. J. A. Miranda Vargas, as vice president; Dr. W. Robert Maloney, secretary-treasurer and Drs. P. H. Dechow and W. W. Kuntz, delegate and alternate, respectively, to the Illinois State Medical Society.

ROCK ISLAND

Society Election.—At the annual meeting of the Rock Island County Medical Society recently, Dr. J. G. Gustafson, Moline, was elected president, to succeed Dr. S. P. Durr, Rock Island, retired. Other officers elected were Dr. A. W. Wise, Rock Island, president elect; Dr. H. C. DeBourcey, East Moline, first vice president; Dr. Carl T. Johnson, Moline, second vice president; Dr. C. S. Costigan, Moline, secretary; Dr. Phoebe Pearsall, Moline, treasurer; Dr. P. P. Youngberg, Moline, historian; and Dr. H. P. Miller, Rock Island, medico-legal advisor. Drs. D.

B. Freeman and J. K. Hanson, both of Moline, were reelected delegates to the Illinois State Medical Society.

Society News.—Speakers before the Rock Island County Medical Society, in Moline, January 9, were Dr. Ralph E. Dolkart, assistant professor of medicine, Northwestern University Medical School, and Dr. Stephen L. Aldrich, fellow, parmly research in medicine, Northwestern University Medical School and St. Luke's Hospital. The subject under discussion was "The Use of ACTH and Cortisone."

SANGAMON

Society News.—Dr. Orren D. Baab, clinical assistant, department of bone and joint surgery, Northwestern University Medical School, addressed the Sangamon County Medical Society, January 4, on "Treatment of Late Wrist Injuries."

ST. CLAIR

New Society Officers.—Dr. Charles F. Alderson is the new president of the St. Clair County Medical Society, succeeding Dr. James E. Wheeler, Beeleville. Other officers are Dr. Edward W. Cannady, president elect; Dr. Owen J. Eisle, vice president; Dr. Louis Kappel, secretary; and Dr. Harold McCann, treasurer. All are of East St. Louis.

VERMILION

Society Election.—Dr. O. J. Micheal was chosen president of the Vermilion County Medical Society at its December meeting. Other officers named are Dr. Jean Moore, vice president; Dr. D. L. Dickerson, secretary-treasurer. Dr. William A. Brams, associate professor of medicine, Northwestern University Medical School, addressed the meeting on "Treatment of Heart Failure." His presentation terminated an afternoon symposium on heart disease held in conjunction with the Illinois Heart Association. The January meeting was addressed by Dr. Claude N. Lambert, associate professor of orthopedic surgery, University of Illinois College of Medicine, on "The Principles of Fracture Treatment." The society announced that Dr. Holland Williamson, president of St. Elizabeth Hospital staff and Dr. R. E. Bucher, president, Lake View Hospital staff, are collaborating with the civilian disaster committee in alloting medical care in event of an emergency.

WHITESIDE

Society Election.—Dr. R. H. Lester, Morrison, was recently elected president of the Whiteside County Medical Society, succeeding Dr. Glenn J. Pohly, Rock Falls. Other officers named, all of Sterling, are Dr. R. N. Redmond, vice president; Dr. M. David Burnstine, secretary-treasurer; Dr. L. S. Reavley, delegate to the Illinois State Medical Society, and Dr. Fletcher Austin, alternate.

WINNEBAGO

Society News.—Dr. Edgar S. Gordon, associate professor of internal medicine, University of Wisconsin Medical School, Madison, discussed "Use of Isotopes in Biology and Medicine" before the Winnebago County Medical Society in Rockford, December 12.

HEALTH DEPARTMENT ACTIVITIES

Work on Tuberculosis Sanitarium Nearing Completion.—Construction of the Mt. Vernon State Tuberculosis Sanitarium, the first State institution of its kind in Illinois, is nearing completion, and furniture and supplies are on order with opening the hospital scheduled early next year.

The sanitarium which will be operated by the state Department of Public Health has a capacity of 100 beds for patients.

The professional staff and other personnel are being recruited rapidly. Among appointments already made are the following:

Dr. Isadore Zapolsky of Elgin, Medical Superintendent; Mr. George Weber of Olney, Business Manager; Mrs. Barbara Fletcher of Blue Island, Chief Nurse; Miss Corinne Hamilton of McLeansboro, Dietician; Mr. Harold U. Anderson of Mt. Pulaski, Chief Engineer.

DEATHS

William Bahrenburg, retired, Belleville, who graduated at the Hahnemann Medical College and Hospital, Chicago, in 1884, died December 26, aged 90. He was a member of the Illinois State Medical Society "Fifty Year Club."

Ernest E. Bullard, Girard, who graduated at St. Louis University School of Medicine in 1910, died December 2, aged 65.

Charles F. Clayton, Chicago, who graduated at Rush Medical College in 1897, died in Lake Worth, Florida, January 5, aged 82.

Dwight Freeman Clark, Evanston, who graduated at Rush Medical College in 1903, died January 4, aged 72. He was on the surgical staff of Northwestern University Medical School and since 1937, president of the Evanston Historical Society.

Roy G. Empson, Valmeyer, who graduated at Washington University School of Medicine, St. Louis, in 1912, died December 16, aged 65. He was a member of the Illinois State Medical Society "Fifty Year Club."

James P. FitzGerald, retired, Winnetka, who graduated at New York University College of Medicine in 1916, died December 25, aged 60.

Clarence M. Frye, Sterling, who graduated at Rush Medical College in 1902, died in Jane Lamb Hospital at Clinton, December 1, aged 73. He served as coroner of Whiteside County for 28 years.

Michael Gleason, Mendota, who graduated at Creighton University School of Medicine, Omaha, in 1927, died December 25, aged 49. He was a member of the American Trudeau Society.

William T. Harsha, Chicago, who graduated at Northwestern University Medical School in 1908, died in Miami, Fla., December 15, aged 66. He was a member of the American College of Surgeons.

Stephen Clement Hogan, Chicago, who graduated at Chicago College of Medicine and Surgery in 1912, died October 31, aged 67.

Charles O. Hoiby, retired, Chicago, who graduated at Rush Medical College in 1902, died December 24, aged 80.

Martin Darwin Jones, Oak Park, who graduated at Rush Medical College in 1899, died December 29, aged 80. He was a member of the American College of Surgeons, and of the Illinois State Medical Society "Fifty Year Club."

Tadeuz M. Larkowski, Chicago, who graduated at Rush Medical College in 1923, died December 24, aged 52, of cerebral hemorrhage. He was professor of surgery at Stritch School of Medicine of Loyola University.

Albert E. Luckhardt, Chicago, who graduated at Albert-Ludwigs—Universität Medizinische Fakultät. Erlangen, Bavaria, in 1901, died January 6, aged 72. He was formerly associate clinical professor of medicine at Loyola University School of Medicine.

Frederick Menge, retired, Chicago, who graduated at Northwestern University Medical School in 1892, died January 8, aged 81. He had practiced in Chicago for 38 years as an otolaryngologist.

Noah Schoolman, Chicago, who graduated at Jefferson Medical College of Philadelphia in 1903, died October 21, aged 75, of arteriosclerotic heart disease.

Maurice L. Seidner, Chicago, who graduated at Jenner Medical College in 1917, died January 1, aged 60. He had practiced medicine in Chicago for 31 years.

Richard E. Somma, Chicago who graduated at Rush Medical College in 1937, died January 12, aged 46. He had been medical examiner for the Prudential Life Insurance Company.

Charles M. Throckmorton, retired, Park Ridge, who formerly practiced in St. Louis, graduated at Jefferson Medical College of Philadelphia in 1885; died December 16, aged 93.

"FOR THE COMMON GOOD"

Health Talk on TV.—Since the last issue of the Illinois Medical Journal, the following telecasts have been presented over WGN-TV, Channel 9:

George Wakerlin, Living with Your Blood Pressure, December 20.

Leo P. A. Sweeney, Can You See, December 27.

Coye C. Mason (repeat), What is Pathology, January 3.

A. Florence Lilley, D.D.S., Your Child's Bite, January 10.

Albert H. Andrews, Jr., Your Voice and You, January 15, 1951.

Jules H. Masserman, Why You Behave as You Do, January 22.

Your Doctor Speaks over WFJL, Thursday evening, at 7:30 carried the following transcribed broadcasts under the auspices of the Educational Committee:

John L. Reichert, How Immunization Protects Your Children, December 28.

Y. T. Oester, Atomic Medicine, January 4.

Irving H. Zitman, Your Blood Pressure, January 11.

S. William Becker, Cosmetics and Care of the Skin, January 18.

Robert R. Mustell, Highlights in the Practical Care and Training of Children, January 25.

You and Your Baby over Station WAAF, Tuesday mornings, at 10:30 a.m. carried the following live broadcasts; this series is being repeated:

William H. Elghammer, The Second and Third Month of Life, January 2.

George L. Drennan, Jacksonville, Immunization, January 9.

Morley D. McNeal, Highland Park, A Mother's Love, January 16.

Here is Your Doctor over Station WCFL, Saturday mornings at 11 a.m., presented the following physicians in transcribed broadcasts under the auspices of the Educational Committee:

Samuel J. Taub, Allergic Diseases, December 30.

Ralph H. Kunstadter, The Overweight Child, January 6.

Steven O. Schwartz, Causes and Treatment of Anemia, January 13.

Carl C. Pfeiffer, How Miracle Drugs Are Born, January 20.

Lectures Arranged Through the Educational Committee:

Paul K. Anthony, January 2, Women's American ORT, Behavior of the Preschool Child.

Philip Lewin, January 17, Kiwanis Club of Chicago Heights, Orthopedic Rehabilitation of Poliomyelitis.

Willard O. Thompson, January 23, Northwest Branch, Woman's Auxiliary, on Obesity, illustrated.

Hugo R. Rony, February 9, Physicians' Fellowship Club Auxiliary, February 9, on Reducing Safely.

Joseph Greengard, February 14, Prospect Heights Child Study Group, on How Emotions Affect Physical Health.

Jerome S. Beigler, March 6, Chesterfield Woman's Club on Life Can Begin at Forty.

L. L. Fatherree, Joliet, March 13, Bloomington Woman's Club, on Public Health.

Lectures Arranged Through the Scientific Service Committee:

Francis D. Wolfe, Chicago, Henry County Medical Society, January 11, on "Polyps of the Large Intestine and Their Management.

Irwin R. Callen, Chicago, Kankakee County Medical Society in Kankakee, January 16, on Newer Developments on Coronary Disease.

Chester C. Guy, Chicago, McDonough County Medical Society, January 26, in Macomb, on Bleeding Peptic Ulcer, illustrated.

Adrien Ver Brugghen, Chicago, Whiteside-Lee County Medical Societies in Rock Falls, March 8, on Head Injuries.

INFECTIOUS MONONUCLEOSIS MAY BE SERIOUS

Infectious mononucleosis is thought of as a benign disease. However, one of its complications, rupture of the spleen, carries a high mortality. In 1918, Timmes, Averill and Metcalfe reported a mortality of 30 per cent in 16 cases collected from the literature. We have reviewed these cases and collected three others and are reporting an additional case, making a total of 20 cases. The overall mortality in these 20 cases is 25 per cent. Sixty per cent were undiagnosed, and 40 per cent of these died. Rupture of the spleen in infectious mononucleosis may be so fulminating that death occurs before any life-saving measures can be taken. Such a rapid termination occurred in the second case, reported by Smith and Custer, which was seen at 8:45 a.m. with symptoms suggesting "acute gastritis", was admitted to the hospital at 10:55 a.m. with the diagnosis of acute hepatitis without jaundice, and died at 11:20 a.m., 25 minutes after admission. Ziegler's case died 2 hours and 50 minutes after onset of acute symptoms.

The most common symptom of ruptured spleen in infectious mononucleosis is a sudden severe agonizing pain in the left upper quadrant. This was seen in 70 per cent of the reported cases. In almost all patients the pain was referred to the left shoulder. At times this sudden pain was preceded by mild abdominal discomfort for several days. Signs of shock were practically immediate, and in several instances the patient collapsed or fainted. Weakness, dizziness, perspiration, nausea and vomiting frequently followed. The abdomen became tender, tense, distended, sometimes rigid. Greatest tenderness was usually over the spleen, but generalized tenderness was frequent and occasionally tenderness occurred over McBurney's point. *Excerpt: Ruptured Spleen in Infectious Mononucleosis, Sandra Gulben, M.D., J.A.M.W.A., Dec.* 1950.

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Dosage: One to two teaspoonfuls every two to three hours. Children, one-half to one teaspoonful every three hours.

BENYLIN EXPECTORANT contains in each fluidounce:

Benadryl hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	80 mg.
Ammonium chloride	12 gr.
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BENYLIN EXPECTORANT is supplied in 16 oz. and gallon bottles.

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Take a puff — DON'T INHALE. Just s-l-o-w-l-y let the smoke come through your nose. AND NOW

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Formula: Each 5 cc. teaspoonful contains: natural belladonna alkaloids, 0.2 mg.; phenobarbital, ¼ gr. (16 mg.); thiamine, 5 mg. (nearly three times the minimum daily requirement); alcohol, 15%. Available in 6 fl. oz. bottles.

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Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

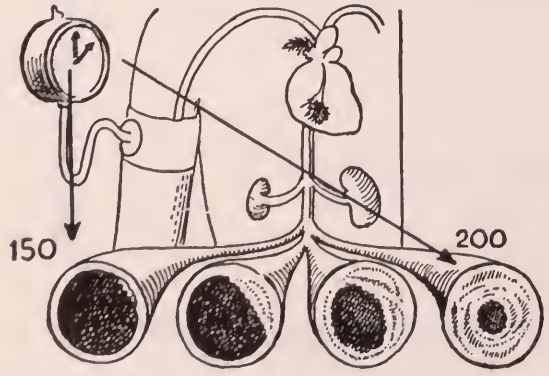
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages; diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

Phenobarbital	15 mg.
Sodium Nitrite	30 mg.
Nitroglycerin	0.25 mg.

With the equivalent of Veratrum Viride Tincture 4 minims (containing 0.1% alkaloids)

RAY-TROTE IMPROVED is effective in dosages of one capsule every three hours. It is contraindicated when renal insufficiency is present, or if pulse becomes abnormally slow following treatment.

For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

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2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

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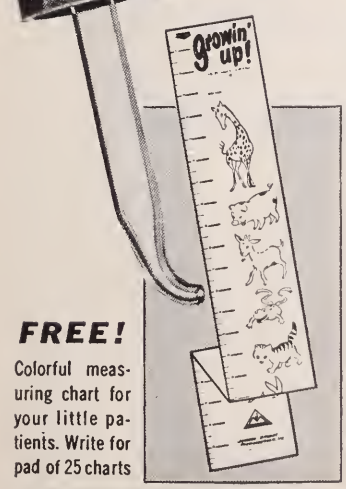


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1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. *57*:541 (1949). 2. Chesley, R. F., and Annitto, J. E.: Bull. Margaret Hague Mat. Hosp. *1*:68 (1948). 3. Dieckmann, W. J. et al.: Am. J. Obstet. & Gynec. *59*:442 (1950). 4. Kelly, H. T.: Pennsylvania M. J. *51*:999 (1948). 5. Neary, E. R.: Am. J. Med. Sc. *212*:76 (1946).

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Penicillin

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More and more physicians are turning to *combined penicillin-sulfonamide therapy;* for it has now been demonstrated that in many instances this combination *is more effective than—and offers many advantages over—the newer antibiotics.*

'Eskacillin-Sulfas' is leading the trend to this new and exciting combination therapy because it is presented to you in the most logical, easily-given and readily-accepted form: *an exceptionally palatable fluid.*

'Eskacillin-Sulfas' is for the treatment of infections caused by organisms sensitive to the action of penicillin or the sulfonamides. Among its many indications are:

Bronchitis	**Pneumonia**	**Sinusitis**
Tonsillitis	**Otitis Media**	**Gonorrhea**

You will also find 'Eskacillin-Sulfas' especially useful in urinary tract infections; bacillary dysentery; meningococcic infections; prophylaxis in streptococcal infections and rheumatic fever; as adjunctive therapy in pneumococcal meningitis and H. influenzae meningitis after the acute phase has subsided; prophylaxis in colonic surgery, surgical wounds and burns; and in certain resistant staphylococcal infections.

'Eskacillin' T.M. Reg. U.S. Pat. Off.

Due to its extremely wide antibacterial spectrum and the minimum chance of the development of resistant strains, many physicians find 'Eskacillin-Sulfas' the ideal therapy when immediate medication is necessary and lack of either time or laboratory facilities prevents exact determination of the specific organism involved.

Each teaspoonful (5 cc.) of 'Eskacillin-Sulfas' contains:

Crystalline potassium penicillin G	100,000 U.
Sulfadiazine	0.167 Gm.
Sulfamerazine	0.167 Gm.
Sulfamethazine	0.167 Gm.

'ESKACILLIN-SULFAS'

the original presentation of penicillin and the sulfonamides in fluid form

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why 'Eskacillin-Sulfas' is in fluid form:

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2. The fluid form assures more rapid attainment of therapeutic blood levels.
3. A palatable fluid is the ideal form for children and for the many adults who balk at, or have difficulty with, tablet medication.

'Eskacillin-Sulfas' is so pleasant tasting your patients will find it easy to take whatever amount you prescribe—and, because of its fluid form, you will find it easy to adjust the dosage.

PHYSICAL MEDICINE ABSTRACTS



TRACHEOTOMY IN POLIOMYELITIS

Robert J. Strobel, M. D., and Morton Canfield, M. D., New Haven, Conn. In ARCHIVES OF OTOLARYNGOLOGY, 52:3:341, September 1950.

During the epidemic of 1949 tracheotomies were done on patients with poliomyelitis in the New Haven Unit of the Grace-New Haven Community Hospital for the first time. The large number of tracheotomies was due both to a higher percentage of patients with severe paralysis requiring tracheotomy and to better understanding of the signs and symptoms of respiratory distress in these patients. The recent excellent articles by Galloway, Priest and others were instrumental in emphasizing the advantages of tracheotomy and the dangers of unrecognized anoxia. Our experience confirms their observations. Delay or failure to do a tracheotomy may result in needless fatality. We wish to record several pertinent observations.

The otolaryngologist should be consulted immediately concerning every patient having poliomyelitis with symptoms of bulbar involvement or respiratory difficulty.

In a desperately ill patient in need of tracheotomy, it is probably more dangerous to delay the tracheotomy than to perform it.

Various physiologic considerations of the cough and swallowing mechanisms are reviewed.

Tracheotomy was done on 10 patients with bulbar poliomyelitis. Five of these patients died.

In all surviving tracheotomized patients, the tracheotomy was probably a life-saving procedure. Earlier tracheotomy in 3 of the 5 who died might have been life saving.

ORTHOPEDIC ASPECTS OF SHOULDER DISABILITIES

Carl Berg, M.D., Washington, D. C. In ARCHIVES OF PHYSICAL MEDICINE, 31:11:703, November 1950.

This is an outline of causes of shoulder pain, for without accurate diagnosis, intelligent treatment is impossible.

Pain in the upper extremity, or brachialgia, is very common, frequently incapacitating and often misdiagnosed. Anything which produces pressure anywhere along the nerve pathways supplying the upper extremity can produce pain.

If motions of the neck are limited and painful or associated with muscle spasm, it is reasonable to suspect that there is something wrong with the cervical spine or its associated structures. If motion in the shoulder joint is limited or painful, one may assume that this joint or its accessories is abnormal.

Probably the most common cause of pain in the neck and shoulders is on a postural basis.

(*Continued on page 62*)



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This complete, pleasant-tasting prescription contains a *selective* cough-controlling narcotic[1] that doesn't impair the beneficial cough reflex . . . an effective bronchodilator[2] to relax plugged bronchioles . . . an expectorant[3] to liquefy secretions. Remarkably free from nausea, constipation, retention of sputum, and cardiovascular or nervous stimulation.

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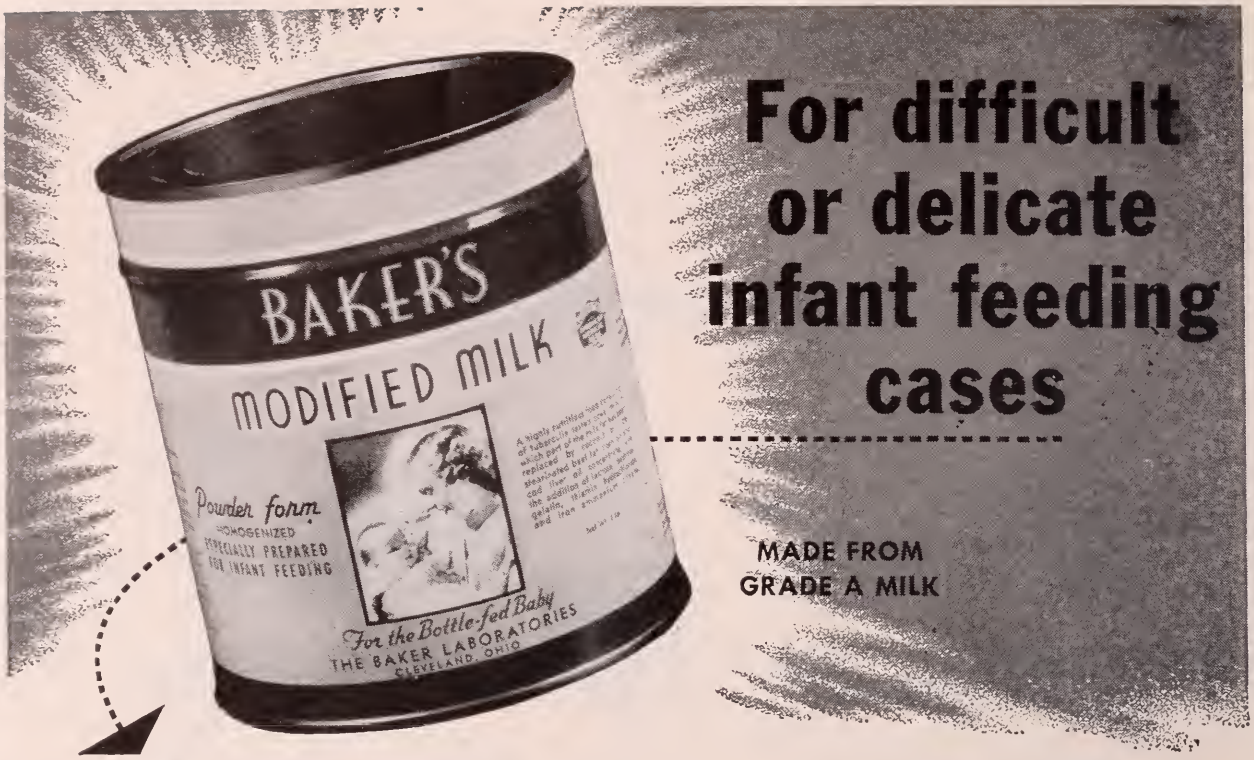
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for the cough with a specific allergic basis.

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[2] Nethamine® Hydrochloride	0.1 Gm.
[3] Sodium Citrate	1.2 Gm.



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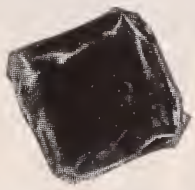
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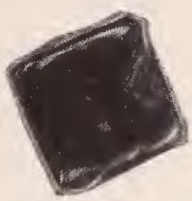
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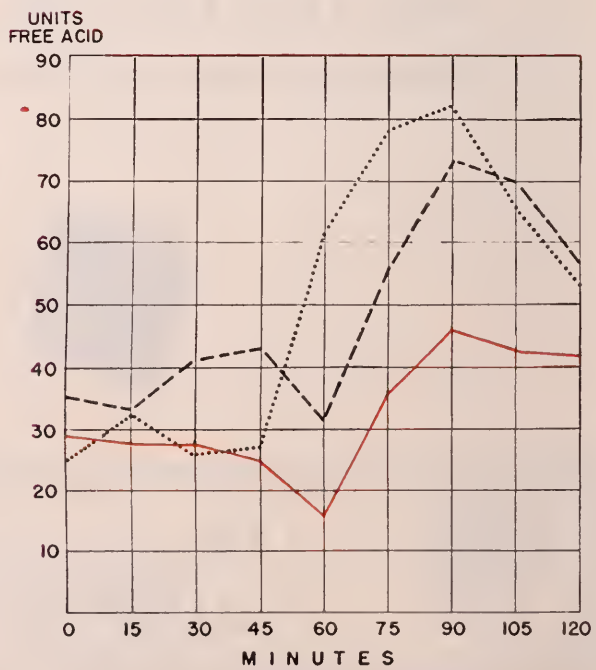
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STEIGMANN AND SCHLESINGER* in the Gastrointestinal Clinic of the Cook County Hospital, Chicago, made a five year study of the effects of available antacids in the treatment of gastroduodenal ulceration.

Various resinous substances were tested including "the new type of 'antacid' "—Resmicon—a synergistic combination of a finely dispersed ion-exchange polyamine resin with a specially processed form of gastric mucin.

Resmicon was given to a series of patients over a period of 2 to 15 months. Most of the patients chosen were those who did not respond well to therapy with other antacids.

EFFECT ENHANCED—The investigators confirmed their previous findings** namely that "the admixture of gastric mucin enhances the effect of the resins."

QUICK RELIEF—"Most patients had good symptomatic relief within the first week (two to seven days) of 'Resmicon' treatment . . .

"They felt better, ate better and gained weight. The majority took the tablets well and there were no complaints regarding constipation or diarrhea."

HEALING ENCOURAGED—"Simultaneously with clinical improvement the patients with gastric ulcer showed significant changes in the size of the craters when x-rays were taken at weekly or bi-monthly intervals.

"Those who were gastroscoped (a total of 19) also showed healing of the ulcer."

"This new substance [Resmicon] appears to combine the good effects of resins (neutralization of the hydrochloric acid in gastric juice without interfering with the acid-base balance) with those of gastric mucin in the treatment of gastroduodenal ulcer."

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*Steigmann, F., and Schlesinger, R. B.: A Resin-Gastric Mucin Mixture in the Medical Management of Peptic Ulcer, American J. Dig. Dis. *17*:361-365 (Nov.) 1950.

**Scientific Exhibit of the A. M. A., Atlantic City Session, 1949.

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Physical Medicine (Continued)

The patient is approaching or has arrived at middle age and usually is engaged in a sedentary pursuit. His discomfort often is definite upon arising in the morning but is most severe after sitting for long periods with the head bent forward over a bench or desk, and especially after driving a car for a long distance.

The mechanism of these changes develops in the following way: As the shoulders continue to sag, the adductors and internal rotators of the humerus become increasingly shortened. The head moves forward so that the cervical spine becomes extended. The anterior cervical muscles contract. The scalene and pectoralis minor muscles take part in this change. The scapula elevators become stretched and weakened, allowing the scapulas to descend. This produces the typical round-shouldered chin forward position. Basically, the remedy lies in developing the scapula elevators. This is accomplished by exercises which the patient performs himself. It cannot be effectively accomplished until the tight anterior structures have been stretched. Heat to the contracted muscles and passive and active stretching make it possible to develop the trapezii by active exercise. A shoulder support and stretching of the neck by traction often are valuable adjuncts. If pain is acute, a collar is of great help. Attention to a proper sleeping position is important. A firm mattress to prevent sagging and a bolster type of pillow under the neck with just enough support under the head to maintain it in neutral alinement are indicated. Total postural correction is necessary for satisfactory results.

PHYSICAL MEDICINE IN THE TREATMENT OF SHOULDER DISABILITIES

K. G. Hansson, M.D., New York. In ARCHIVES OF PHYSICAL MEDICINE, 31:11:696, November 1950.

The commoner shoulder disabilities may be considered in three groups:

(a) When pain is the cardinal symptom;

(b) When the main difficulty is weakness of the shoulder;

(c) When the main factor is stiffness of the joint.

Pain.—I. In the first group, the pain is due

(*Continued on page* 64)

In Childhood Fevers—



The youngster with an acute febrile condition will be more cooperative if pleasant-tasting Aspergum is selected as the antifebrile agent.

Quickly soluble in the saliva and gastric juice, the acetylsalicylic acid in Aspergum reaches the blood stream rapidly.



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Physical Medicine (Continued)

to peritendonitis, which can be treated conservatively by the use of an ice bag and sling in the acute stage or the application of heat and exercise in the chronic stage.

II. Radiculitis is a nerve pain that may reach from the neck down to the hand. Symptoms of pain in the occipital region over the scapula, shoulder, forearm or hand generally indicate different levels of root pressure. Poor posture or osteoarthritis, or a combination of the two, usually is the cause.

III. The scalenus anticus syndrome includes pain about the shoulder and upper extremity following the radial, ulnar and medial nerves. Often there are vascular complaints and vasomotor symptoms, and these usually indicate pressure of the brachial vessels or brachial plexus passing over the bony ridge or the thorax. Treatment consists in relieving this pressure.

Weakness.—I. Poliomyelitis often is followed by residual weakness of the deltoid muscle. It is most important to support the weak muscle and maintain the tone and blood supply of the same muscle.

II. Serratus magnus paralysis of the long thoracic nerve will produce a typical winged shoulder. Treatment here also is support of the weakened muscle and proper exercise to regain muscular strength.

III. Erb's palsy, clinically, produces flacoid paralysis of the upper extremity, but later deformity develops as a result of contractures of unopposed muscles. With this in view, splintage and conservative treatment over a long period of time are important.

Stiffness.—I. Rheumatoid arthritis of the shoulder joint should be treated the same as arthritis in any part of the body.

II. Frozen shoulder may follow any pain of the upper extremity and often results in retrogression of function when shoulder joint movement is substituted by shoulder girdle movement. Treatment should be based on retraining the patient in the proper reflex pattern.

III. Of fractures about the shoulder, impacted fractures of the cervical neck can be placed under treatment in the second day. It is most important, however, to emphasize the external

(*Continued on page 66*)



Portrait of a former "coughing" patient

after his physician prescribed the highly palatable, non-narcotic Robitussin: distinguished by its intense and prolonged action in increasing respiratory tract fluid, and by its ability to improve mood.

(Glyceryl guaiacolate 100 mg., and desoxyephedrine hydrochloride 1 mg., in each 5 cc.)

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rotation which often is lost by the position of the arm in a sling. Without external rotation, complete abduction of the shoulder is impossible.

If more specific diagnosis of shoulder disabilities is obtained, more specific treatment will follow, with better results for the patient.

SUCTION SOCKET PROSTHESIS FOR THE ABOVE KNEE AMPUTEE

John H. Aldes, M.D., F.A.C.S., Van Nuys, Calif.
In ARCHIVES OF PHYSICAL MEDICINE, 31:11:709, November 1950.

The suction socket prosthesis is an artificial limb which is held on by a moderate suction created in the closed socket and is so fabricated that it conforms to the anatomic features of the stump, thereby allowing the muscles of the stump to control all physiologic movements of the limb. The only apparent difference between the conventional above-the-knee prosthesis and the suction socket leg is that the latter eliminates all suspension harness, pelvic belt and hip control. . .

In the selection of the group for the initial use of suction socket, one of the factors that had to be considered was the muscle tone not only of the stump but of the opposite leg and the entire body as well. Each applicant was examined by the physical therapist. Gait, posture and muscle strength were important if we were to evaluate the wearer accurately. Very few of the group selected could be classified as good walkers. Postures were poor, and in about 50 per cent of the patients muscle tone of the stump was only fair.

Heavy resistance exercises have proved most beneficial in strengthening not only the stump and the opposite leg but the entire body as well. Many of our suction socket applicants who had worn a conventional prosthesis for several years had hip contractures, poor quadriceps tone in both thighs, weakness of the opposite knee and

(*Continued on page* 68)



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Soothing the Hemorrhoidal Area . . . Analgesic, vasoconstrictive medication in contact with the entire hemorrhoidal zone is provided in Numoroidal Suppositories. The special emulsifying base mixes with the secretions to assure coverage of the rectal area.

Convenient: Individually packed. No refrigeration necessary.

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at the first sign of a cold

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ALL 4 BASIC SURGICAL CURRENTS

1. *Tube Generated Cutting Current.*
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3. *A controlled mixed blend of both above currents on selection.*
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Physical Medicine (Continued)

general flabbiness in the abdominal and lower spinal muscles.

Replacement of the conventional leg with a suction socket prosthesis generally causes imbalance in gait. To overcome this imbalance, the patients are placed on crutches and are given walking exercises to be done in front of mirrors.

Walking instructions should be given gradually after the suction socket has been fitted.

Summary:—(1) A suction socket prosthesis can be used successfully in about 75 per cent of the above-the-knee amputees if the stump is at least 10 inches in length below the greater trochanter, is well formed and has good muscle tone.

(2) The best results with this prosthetic device are obtained with patients between the ages of 21 and 40.

(3) The majority of failures with the suction socket are due to poor fitting.

(4) Physical rehabilitation of the amputee is a vital step toward the success of the suction socket.

(5) The advantage of the suction socket over the conventional prosthesis is that it allows a greater freedom of movement, better control of the leg, since it feels like a normal part of the body, and lack of need for pelvic belts, hip controls and suspenders.

(6) The muscles of the stump hypertrophy and increase their physiologic action with the wearing of a well fitting suction socket.

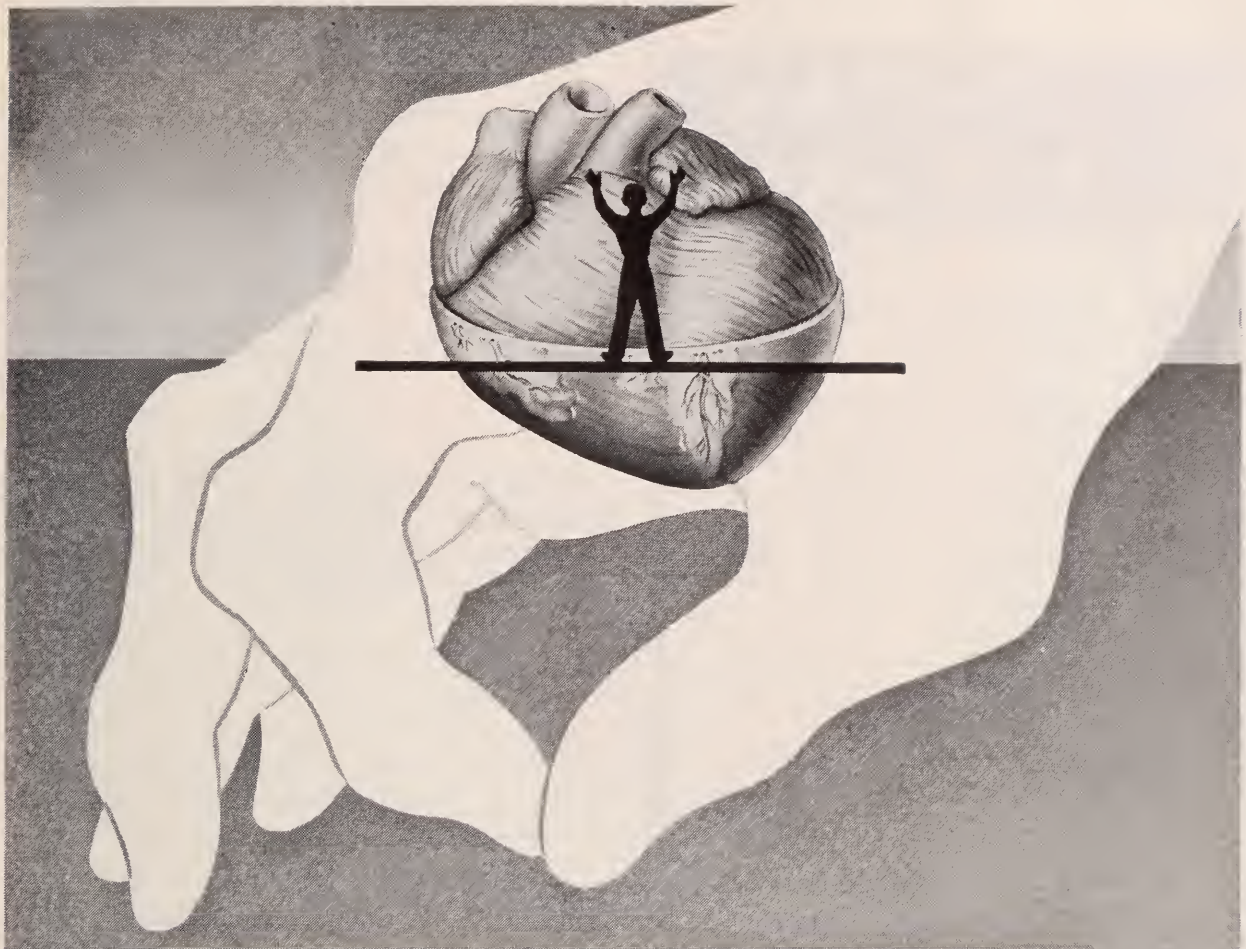
(7) Without the wholehearted cooperation of the patient, limb fitter, corrective therapist and orthopedic surgeon in following through with frequent check-ups during the first year of wear, the suction socket cannot be a success.

TEMPERATURES PRODUCED IN BONE MARROW, BONE AND ADJACENT TISSUES BY ULTRASONIC DIATHERMY: AN EXPERIMENTAL STUDY

Paul A. Nelson, M.D., J. F. Herrick, Ph.D., and Frank H. Krusen, M.D., Rochester, Minn. In ARCHIVES OF PHYSICAL MEDICINE. 31:11: 687, November 1950.

Ultrasonic radiation can produce rather sharply localized heating in living tissues.

(*Continued on page* 70)



HIGHER NEW ANTIRHEUMATIC THERAPY *SALICYLATE LEVELS* VITAMIN C PROTECTION

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Physical Medicine (Continued)

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ELECTRICAL RESISTANCE OF THE SKIN DURING INDUCED EMOTIONAL STRESS: A STUDY OF NORMAL INDIVIDUALS AND OF PATIENTS WITH INTERNAL DISEASE

J. M. Van Der Valk, M.D., and J. Groen, M.D. In PSYCHOSOMATIC MEDICINE, 12:5:303, September-October 1950.

By "electrical resistance of the skin" we understand, in this paper, the total resistance offered by the human body when it is connected into a direct current of constant low voltage. It is realized that the resistance of the human body defined in this way is a complicated value, determined, among other things, by external and internal polarization, and by the "true" resistance of the skin. For practical purposes, however, the designation "electrical skin resistance" will be used.

The electrical resistance of the skin against a direct current of constant low voltage was measured in normal individuals and in patients with various internal diseases, under the following circumstances:

(1) Immediately after the connection of the subject into the circuit. The value thus obtained is designated as initial resistance.

(2) When, for ten minutes after the connection of the subject, no external stimuli were applied and the subject was told not to move and not to speak.

(3) During the next fifteen minutes when the subject was asked to answer a set of standard questions.

(4) During an interview in which emotional material from the subject's life history was discussed with him.

The initial resistance was generally found to be high in patients with peptic ulcer, ulcerative

(*Continued on page* 74)



Actual photograph of a heart showing marked abundance of epicardial fat. Pathologist's diagnoses: "obesity; left ventricular hypertrophy; pulmonary edema and congestion; fatty infiltration of liver; fatty infiltration of pancreas."

The heart of an overweight patient

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CARBOHYDRATE	22 Gm.	VITAMIN A	1000 I.U.	VITAMIN D	140 I.U.
CALCIUM	370 mg.	VITAMIN B_1	0.39 mg.	CALORIES	225
PHOSPHORUS	315 mg.	RIBOFLAVIN	0.7 mg.		

*Based on average reported values for milk.

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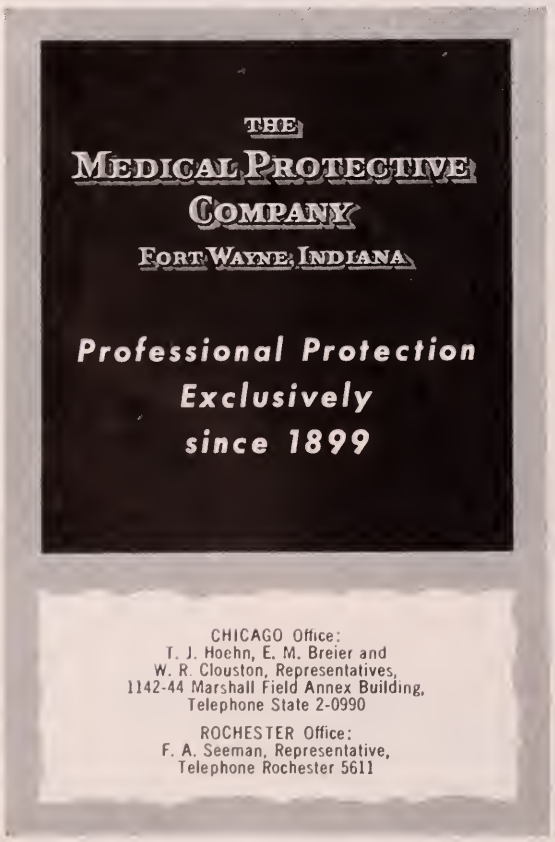
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Physical Medicine (Continued)

colitis, diabetes, and some vascular diseases, and low in some other diseases.

During the silent period the resistance usually decreased. It was found to increase when the subject under the circumstances of the experiment was brought into *tension,* by which the authors understand a condition of more or less consciously inhibited discharge of emotion. It appeared that normal individuals and most patients only infrequently became tense under the circumstances of the experiment. However, in patients with peptic ulcer, ulcerative colitis, diabetes, essential hypertension and peripheral vascular disease, an attitude of tension was readily produced under these circumstances. In these diseases a rise of the electrical resistance was commonly observed.

The answering of the set of standard questions or the discussion of an emotional subject was found to decrease the skin resistance when the subject was given an opportunity to discharge his emotions in this way.

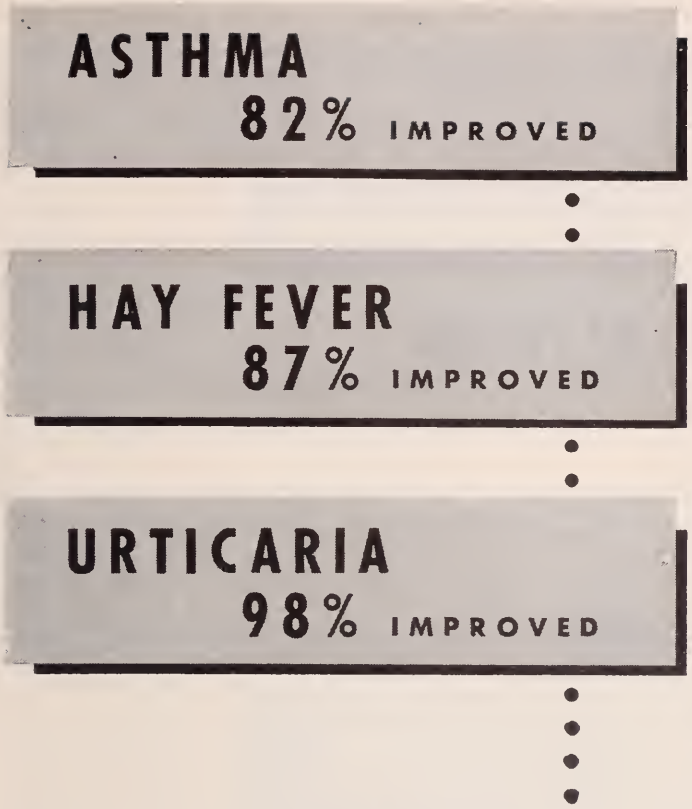
The registration of the skin resistance may be used as a method to measure tension in seemingly quiet individuals.

THE TREATMENT OF PAIN AND "SPASM" IN POLIOMYELITIS WITH "PRISCOLINE"

W. O. Geisler, M.D., W. T. Mustard, M.D., and C. S. Anglin, M.D., Toronto, Ont. In THE CANADIAN MEDICAL ASSOCIATION JOURNAL, 63:1:60, July 1950.

The most damaging effect of poliomyelitis is flaccid paralysis. This paralysis is determined by the extent of anterior horn cell destruction as a result of virus invasion of the central nervous system. There is no available therapy that influences the recovery of the anterior horn cell.

Muscle pain, tenderness and hypertonic contracture in the acute and early convalescent stages of poliomyelitis is a symptom complex of minor consequence in the absence of paralysis. If paralysis is added, this symptom complex becomes more important as a possible factor in producing deformities. From a study of two groups of children demonstrating pain, muscle tenderness and hypertonic contracture with added paralysis as a result of poliomyelitis, we do not feel that priscoline demonstrated any particular value as an adjunct to physical therapy.



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BOOK REVIEWS



PRINCIPLES OF INTERNAL MEDICINE. T. R. HARRISON, Editor-in-Chief. Editors: Paul B. Beeson, William H. Resnik, George W. Thorn and M. W. Wintrobe. 53 contributors. Blakiston, Philadelphia, 1950. 1590 pages. $12.00.

Even the statistics of this massive new textbook of internal medicine are impressive. It has five editors and 53 contributors. It has 114 tables, 245 figures and 1590 pages. The weight according to my scales is 8¾ lbs. The geographic distribution of the contributors is of interest: 20 are from the south, 15 from the east, 9 from the west, 7 from the midwest, one each from Puerto Rico and England. Thus the majority of the authors are from the south and only one-third of them are easterners. This book is thus an exception to the general rule that most of our medical texts are written by easterners, although let me hastily add that many important texts originate from other parts of the country. The predominance of eastern authors is by no means a disadvantage; still, provincialism is present as much in medical writing as in anything else and in a general text of this kind the presentation of different viewpoints is most suitable. One's viewpoint is bound to be affected by change in geographical location, since it subjects him to new attitudes and different ideas. The transplanted Bostonian may retain his accent but certainly he is at least exposed to new thoughts, and the Kansan who moves east may change his mind although he doesn't change his way of dressing. In this particular book the authors are all capable and distinguished, and many of them are relatively young. This results in a fresher viewpoint than usual. The editors can congratulate themselves that the remarkably high standard of writing is maintained throughout.

The book emphasizes the functional approach to disease, devoting the first five sections to this. The classical approach with primary emphasis on specific diseases is covered in the last two sections.

The introduction, dealing with the approach to the patient, is short but excellent. The last two lines are worth quoting: "The true physician has a Shakespearean breadth of interest in the wise and the foolish, the proud and the humble, the stoic hero and the whining rogue. He cares for people."

Part I, Cardinal Manifestations of Disease, occupies about 1/5 of the book. This section does not merely list symptoms but classifies them into differential diagnosis, including discussion of course and treatment. The charts are especially clear and helpful.

Part II includes Physiological considerations of disease in general. Some of the subjects such as fluid and electrodyte balance, intermediary metabolism and electrophysiology may seem somewhat theoretical and technical, but their understanding is important when one considers that diseases such as diabetes, pellagra and diphtheria are related to disorders of intermediary metabolism.

Part III, Reactions to Stress and Antigenic Substances, summarizes our present knowledge on this new and important subject.

Part IV, Metabolic and Endocrine Disorders, V, Diseases Due to Chemical and Physical Agents, VI, Diseases due to Biologic Agents and VII, Diseases of Organ Systems, are more conventionally arranged.

Throughout the book there is emphasis on basic principles with avoidance of repetition. Little space is given to extended discussion of rare diseases; common conditions are fully discussed. Practical information is abundant. The bibliography is intended to

(*Continued on page 78*)

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1. Hoffman, Murray M., Ill. Dent. Jl., 19:439-445 (Oct., 1950)

2. McNealy, Raymond W., Ill. Med. Jl., 97:150 (Mar., 1950)

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BOOK REVIEWS (Continued)

be pertinent rather than comprehensive, as is proper in a book of this kind.

This is a remarkable book not only in its modern functional arrangement but also in the detailed consideration of specific problems confronting student and practitioner, and in the emphasis on basic principles so important for an adequate understanding of medicine. The quality of the writing is unusually high for a medical text. I predict that this book will rapidly become a favorite among students, who will overlook its weight and bulkiness. Recommended.

J. C. S.

PRINCIPLES OF GENERAL PSYCHOPATHOLOGY: An Interpretation of the Theoretical Foundations of Psychopathological Concepts. By Siegfried Fischer, M.D., Clinical Instructor in Psychiatry, University of California, formerly professor of psychiatry and neurology, University of Breslau. Philosophical Library, New York, 1950. 327 pages. $4.75.

This book is intended to introduce students of psychopathology. A certain amount of knowledge of psychology is assumed, although some parts of psychology are reviewed where it is necessary for clear understanding.

The book is easier to understand than a good many of its type, although the language in this whole field is, almost by definition, difficult. The sections on intelligence and neurosis are good. Additions to our knowledge from World War II are well integrated. There is little mention of psychoanalysis; indeed the word is not to be found in the table of contents or index. This is an indication that psychoanalysis concepts, although important, have been overemphasized in the past.

J. C. S.

BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

CHILD PSYCHIATRY IN THE COMMUNITY — A Primer for Teachers, Nurses, and Others Who Care for Children. By Harold A. Greenberg, M.D., in collaboration with Julian H. Pathman, Ph.D., Helen A. Sutton, R.N., B.A., B.S., Marjorie M. Browne, B.A., M.A. G. P. Putnam's Sons, New York, 1950. 296 pages. $3.50.

TOXAEMIAS OF PREGNANCY — Human and Veterinary. Proceedings of the Symposium held in London under the auspices of the Ciba Foundation; Edited by John Hammond, M.A., D.Sc., F.R.S., F. J. Browne, M.D., D.Sc., F.R.C.S., and G. E. W. Wolstenholme, O.B.E., M.B., 93 illustrations; 280

(*Continued on page* 80)

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1. Prigal, S. J.: Bacteriologic and Epidemiologic Approach to the Treatment of Respiratory Infections with Aerosols of Specific Antibiotics, Bull. N. Y. Acad. Med. 26:282 (Apr.) 1950.

2. Stovin, J. S.: The Use of Bacitracin in the Treatment of Sinusitis and Related Upper Respiratory Infections, New York Physician 32:14 (July) 1949.

3. Prigal, S. J., and Furman, M. L.: The Use of Bacitracin, a New Antibiotic, in Aerosol Form; Preliminary Observations, Ann. Allergy 7:662 (Sept.-Oct.) 1949.

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BOOKS RECEIVED (Continued)

pages. The Blakiston Company, Philadelphia 5, Pa., Toronto 2, Canada, 1951. $4.50.

RECENT ADVANCES IN NUTRITION, with Particular Reference to Protein Metabolism, by Paul R. Cannon, Ph.D., M.D., Chairman of the Department of Pathology, University of Chicago. In collaboration with Earl P. Benditt, M.D., Laurence E. Frazier, M.A., Eleanor M. Humphreys, M.D., Harold C. Steffee, M.D., Ph.D., Robert W. Wissler, M.D., Ph.D., Robert Woolridge, M.A. Porter Lectures, Series 14. 74 pages. University of Kansas Press, Lawrence, Kansas, 1950. $2.00.

SAVILL'S SYSTEM OF CLINICAL MEDICINE — Dealing with the Diagnosis, Prognosis, and Treatment of Disease for Students and Practitioners. Edited by E. C. Warner, M.D., F.R.C.P. Thirteenth Edition. 1198 pages. The Williams & Wilkins Company, Baltimore, 1950. $7.00.

PULMONARY VENTILATION AND ITS PHYSIOLOGICAL REGULATION. By John S. Gray, M.D., Ph.D., Professor of Physiology, Northwestern University Medical School, Chicago, Illinois. Charles C. Thomas, Publisher, Springfield, Illinois, 82 pages. $2.00.

YOUR PROSTATE GLAND — Letters from a Surgeon to his Father. By Reed M. Nesbit, M.D., Professor of Surgery, University of Michigan Medical School, Chief, Section on Urology, University Hospital, Ann Arbor, Michigan. Illustrations by Janet McLaughlin. Charles C. Thomas, Springfield, Illinois, Publisher. 50 pages. $2.00.

TREPHINE TECHNIQUE OF BONE MARROW INFUSTIONS AND TISSUE BIOPSIES. By Henry Turkel, B.A., M.A., M.D., 60 pages. Copies may be procured from Trephine Instruments Inc., 1301 Industrial Bank Bldg., Detroit, Michigan. $1.00 per copy.

THE SCIENCE OF HEALTH — Second Edition. By Florence L. Meredith, B.Sc., M.D., Fellow of the American Medical, American Public Health and American Psychiatric Associations. 48 tables and charts; 134 illustrations; 452 pages. The Blakiston Company, Philadelphia, Pa., 1951. $3.75.

DIATHERMY — The Use of High Frequency Currents. By Stafford L. Osborne, B.P.E., M.S., Ph.D., Professor and Chairman, Department of Physical Medicine, Northwestern University Medical School, Charles C. Thomas, Springfield, Illinois, 1950. $3.00.

During the last twenty years a great and increasing interest has been taken in the incidence of tuberculosis in nurses and the methods to be used in an endeavor to reduce this. It is now clearly recognized that nurses, even in general hospitals where tuberculosis is rigidly excluded, run a far greater risk of developing this disease than do comparable members of the general population. Geoffrey Bewley, M.D. Dubl. F.R.C.P.I., F.R.C.S.I., D.P.H. — The Lancet — March 25, 1950.





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tion, the catheter tip can be directed down the inferior vena cava into a renal vein, into a hepatic vein, into the coronary sinus, or where openings exist between the right and left chambers of the heart it may also be guided into the left auricle, a pulmonary vein, the left ventricle or the aorta. It requires little imagination to appreciate the difference between the theoretical possibility of the accomplishment of these objectives and their realization in practice. However, with experience and careful technic, a skillful operator can attain his objective in a reasonably high percentage of cases. *Excerpt: Cardiac Catheterization, Laurence B. Ellis, M.D., and Richard A. Bloomfield, M.D., Boston, New England J. M., Aug. 31, 1950.*

Every mother of a family, and every doctor in practice, firmly believes that the best bulwark against infection is good wholesome food. The association of tuberculosis with poverty and malnutrition is particularly noteworthy. Editorial, Lancet, December 24, 1949.

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ARMY DEVELOPS PERFECT SUBSTITUTE FOR MORPHINE

Perfection of a new synthetic narcotic to replace morphine has been announced by Dr. Henry K. Beecher, civilian consultant to the Army Surgeon General. Dr. Beecher is Professor of Research in Anesthesia at the Medical School of Harvard University and Chief of the Department of Anesthesia at Massachusetts General Hospital.

Just arrived from Korea where the new drug, methadone, was tested at the farthest forward evacuation hospital near Hamhung on hundreds of American and allied wounded, Dr. Beecher declared that the field tests verified the findings that have been made in thousands of postoperative cases during the last three years at Massachusetts General Hospital.

The story of methadone goes back to the day in 1945 when the Army took over the I. G. Farben plant in Germany. Preliminary work had been done there and the information turned over to the Research and Development Board of Army Medical Service. During the postwar years the Surgeon General's Office has worked closely with other interested groups to perfect the new synthetic which has the same effect as morphine, milligram for milligram, and which is made from nitriles derived from nitrogen and hydrocarbons.

Final validation has been made under the most rigid conditions and methadone can be used either as a substitute or interchangeable with morphine. The racemic form of methadone is now on the market and is being made by several manufacturers for the government. The form known as Levo-Iso is the best to date.

An interesting sidelight is that methadone may be less habit forming and will probably be a great help in curing morphine addicts. Tests at the U. S. Public Health Service for addicts at Lexington, Kentucky, showed the drugs relieve the terrible sufferings of patients being taken off morphine.

While the pain killing power is as great as that of morphine its side effects are even better since Levo-Iso produces far less nausea and vomiting. It has the same effect in depressing respiration as does morphine. While generally administered subcutaneously, it may be given intravenously or by mouth.

The Army operates under the most exacting and variable conditions throughout the world. Accordingly, before making a final appraisal of methadone it was felt that the ultimate test lay in using it in the most demanding environment we ever expect to encounter. Actually, two field tests were made in the Far East, one by three doctors at Tokyo Army Hospital who administered methadone on a round-the-clock basis; the other by Dr. Beecher himself at the evacuation hospital near Hamhung. In the field it was used preoperatively in from minutes to hours of the time men were wounded. One major objective of the

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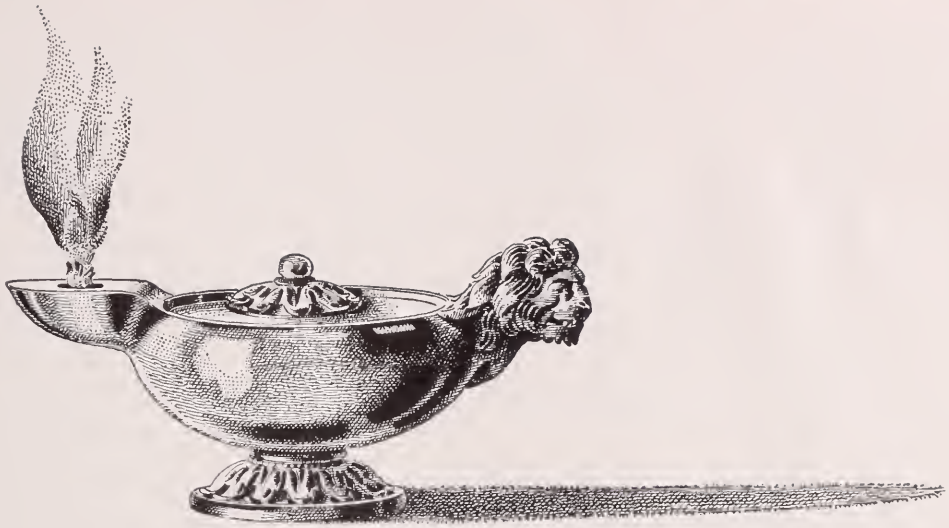
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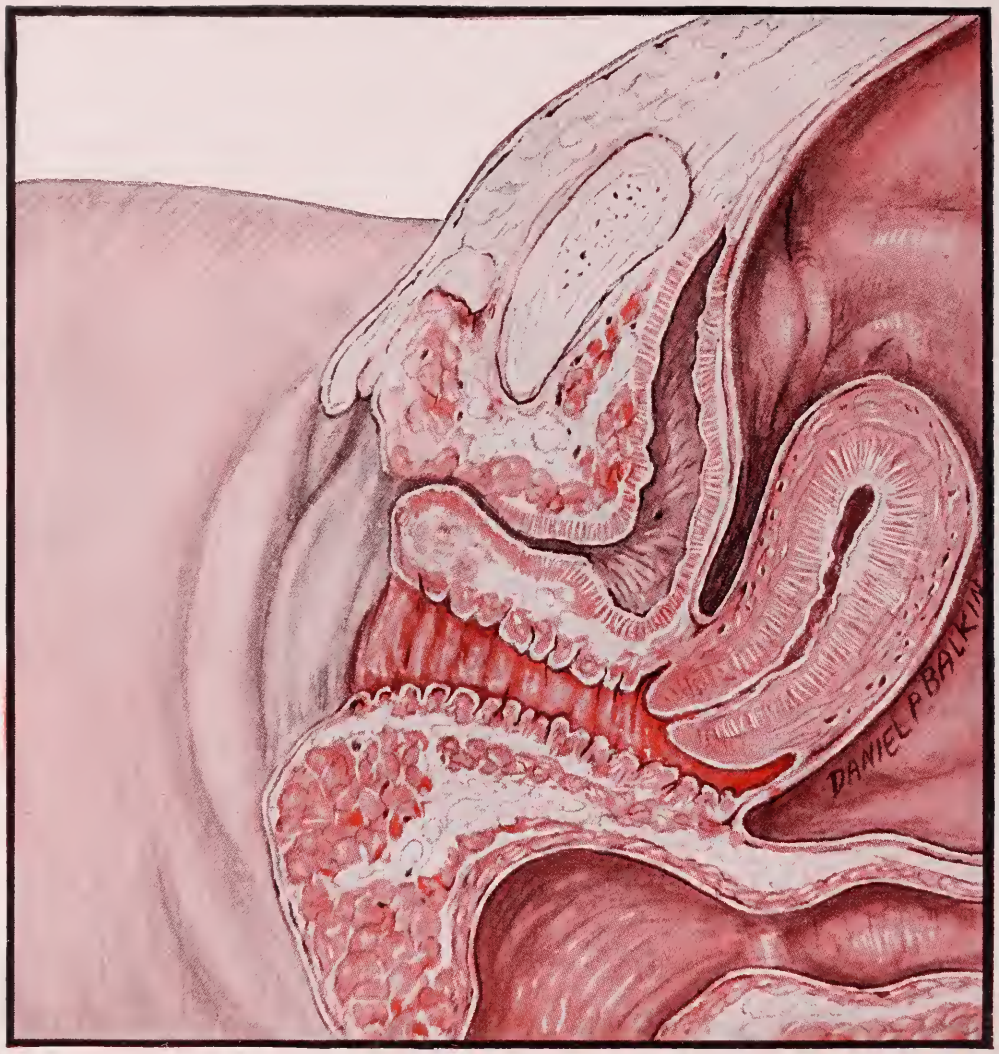
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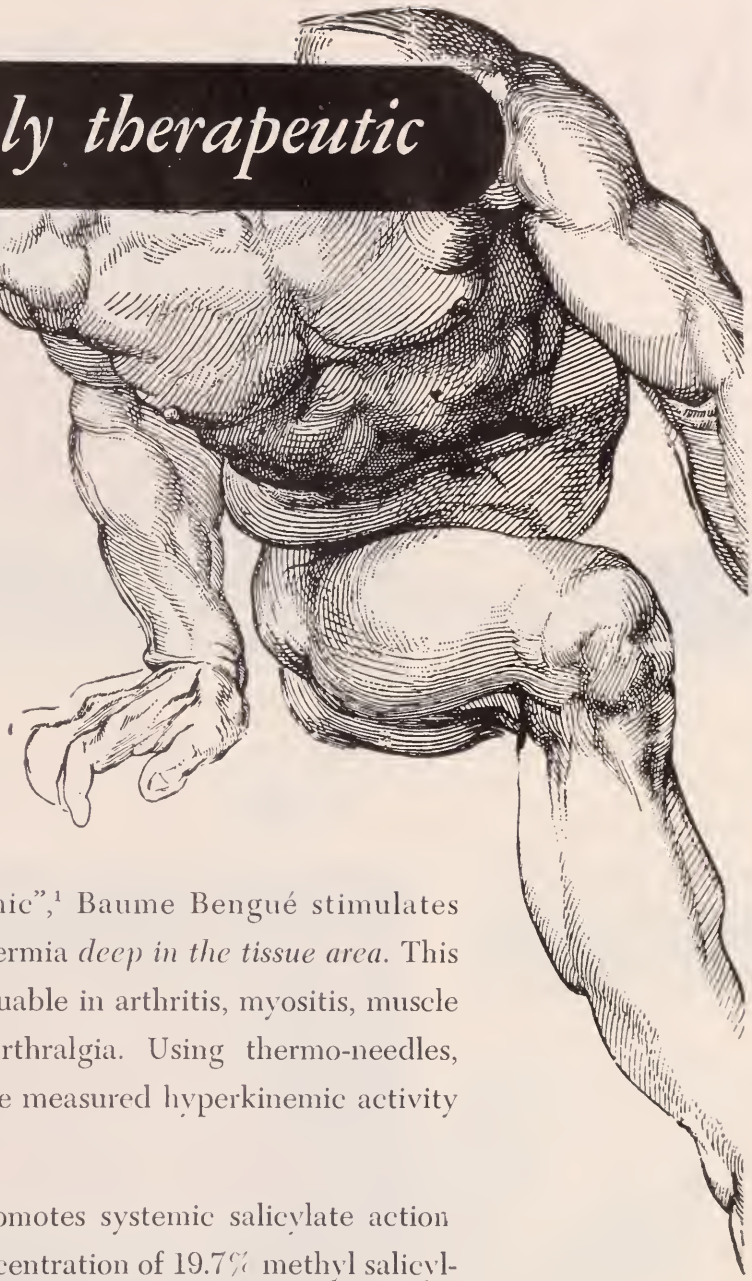
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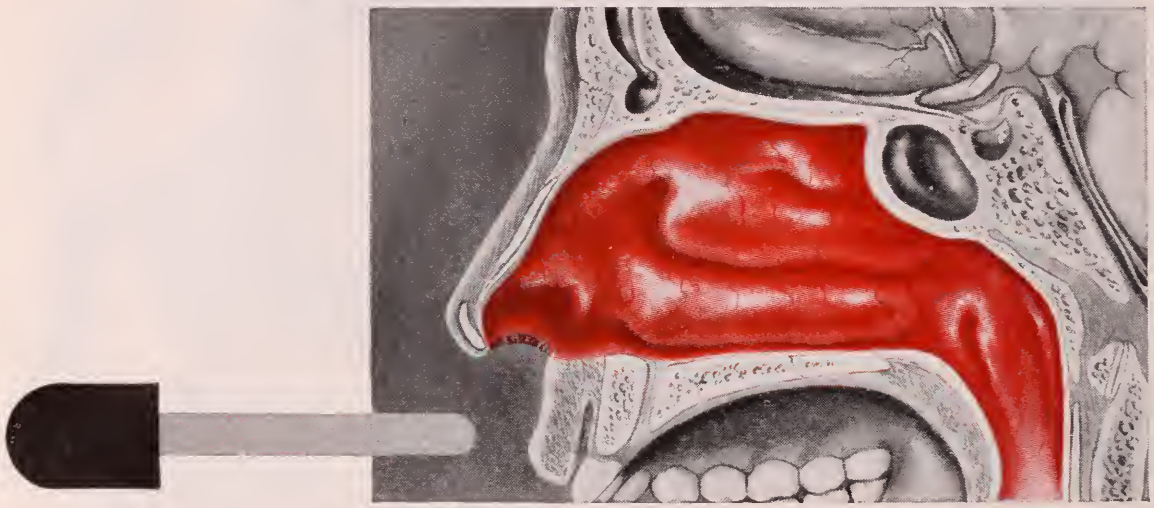
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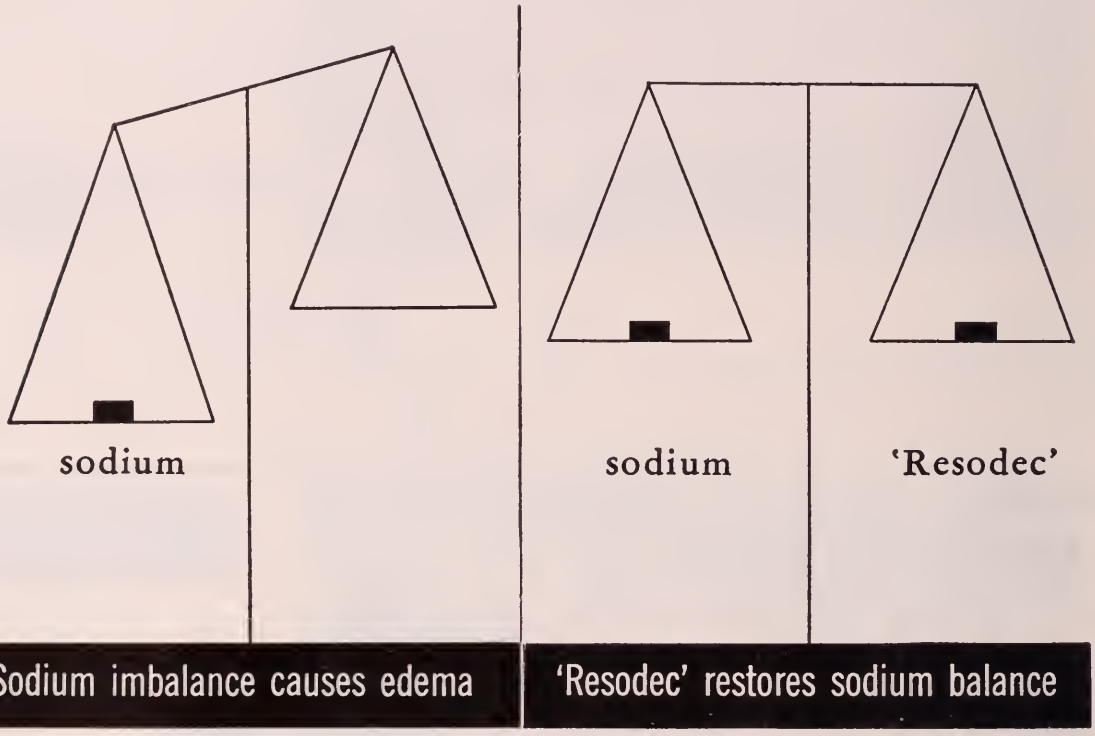


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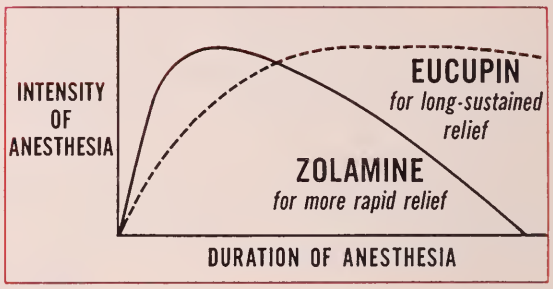
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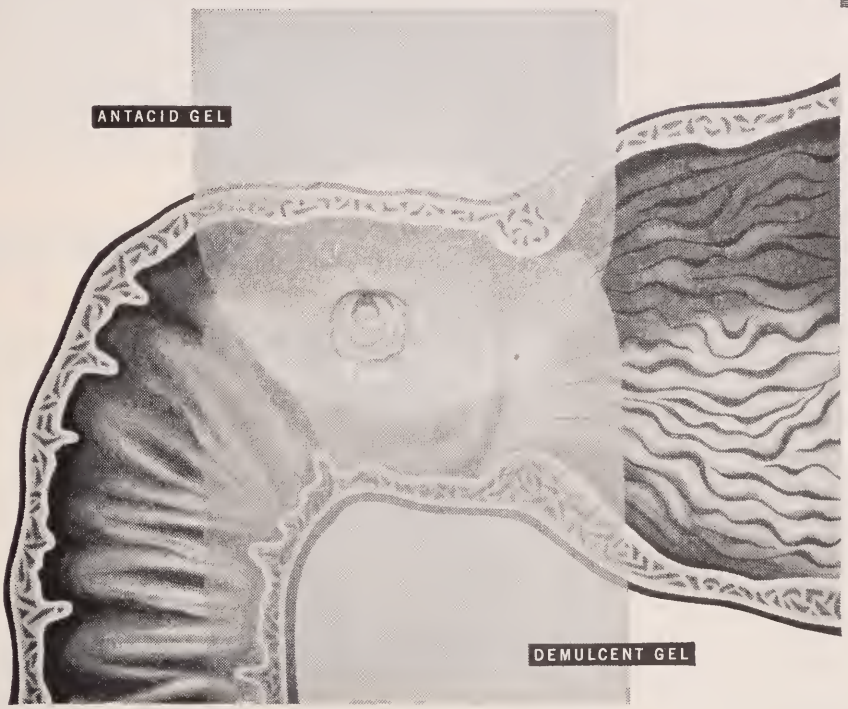


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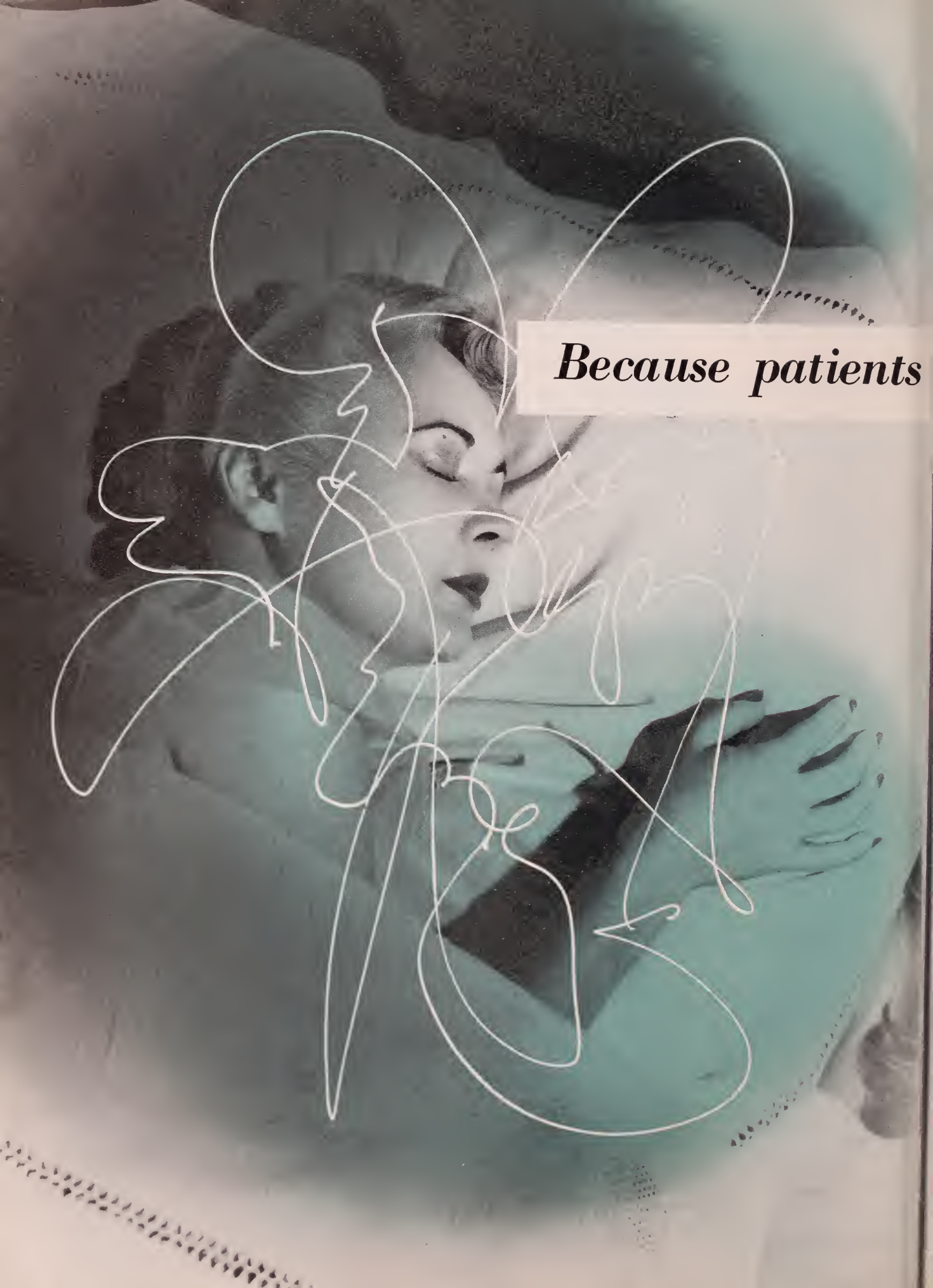
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2. Promotes healing of the ulcer crater in a matter of days
3. Does not interfere with digestion
4. No untoward effect on normal body metabolism—no acid rebound, no alkalosis
5. Does not inhibit the action of antispasmodics or laxatives if and when these are indicated
6. Safe to take for long periods of time
7. Pleasant and convenient to take
8. Economical

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

AMPHOJEL®

ALUMINUM HYDROXIDE GEL • ALUMINA GEL, WYETH

WYETH INCORPORATED, PHILADELPHIA 2, PA.


Because patients

can't "SLEEP OFF" *hypertension...*

prolonged vasodilation is as essential at night as during the day. (One more reason why NITRANITOL is the most universally prescribed drug in the management of hypertension.)

NITRANITOL®

FOR GRADUAL, PROLONGED, SAFE VASODILATION

Merrell
1828
CINCINNATI • U.S.A.

When vasodilation alone is indicated. *Nitranitol.* (½ gr. mannitol hexanitrate.)

When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combines Rutin 20 mg. with above formula.)

When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline.* (½ gr. mannitol hexanitrate combined with ¼ gr. Phenobarbital and 1½ grs. Theophylline.)

Gantrisin

'Roche'

antibacterial action plus . . .

■ greater solubility

Gantrisin is a sulfonamide so soluble that there is no danger of renal blocking and no need for alkalinization.

■ higher blood level

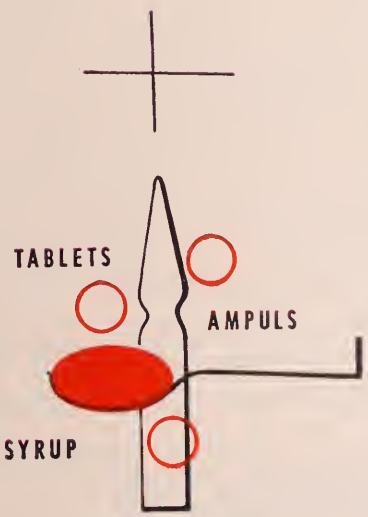
Gantrisin not only produces a higher blood level but also provides a wider antibacterial spectrum.

■ economy

Gantrisin is far more economical than antibiotics and triple sulfonamides.

■ less sensitization

Gantrisin is a single drug—not a mixture of several sulfonamides—so that there is less likelihood of sensitization.

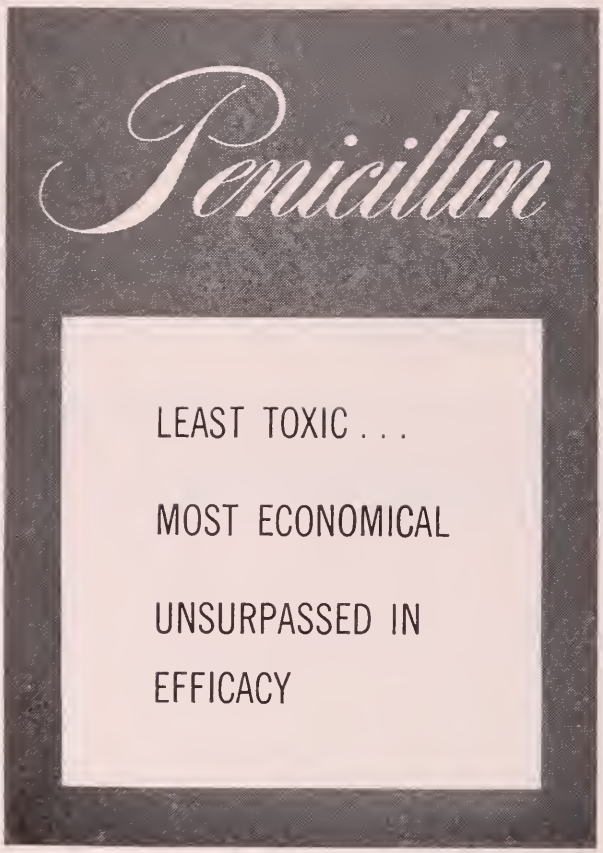


GANTRISIN®—brand of sulfisoxazole
(3,4-dimethyl-5-sulfanilamido-isoxazole)

HOFFMANN-LA ROCHE INC.

Roche Park • Nutley 10 • New Jersey

THE ANTIBIOTIC OF CHOICE *In Gram-Positive and Gonococcic Infections:*



CRYSTALLINE PROCAINE PENICILLIN G MERCK FOR AQUEOUS INJECTION

For Prolonged Therapeutic Blood Levels of Penicillin.

PENICILLIN PRODURAL®

Crystalline Procaine Penicillin G and Buffered Crystalline Penicillin G Potassium for Aqueous Injection.

For Immediate High and Prolonged Blood Levels of Penicillin.

CRYSTALLINE PROCAINE PENICILLIN G MERCK IN OIL

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For Maximum Prolongation of Therapeutic Blood Levels of Penicillin.

CRYSTALLINE PENICILLIN G SODIUM U.S.P. MERCK

For Highest Peak Levels of Penicillin- Short Duration.

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MERCK & CO., INC.
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RAHWAY, NEW JERSEY



AUREOMYCIN

Hydrochloride Crystalline

Lederle

Effective against many bacterial and rickettsial infections, as well as certain protozoal and large viral diseases

Every precaution against contamination and every device that will safeguard the quality and sterility of the content of aureomycin in vials for research parenteral use has been adopted in the sterile filling rooms at our Pearl River laboratories. Rigid aseptic technique surrounds the filling process. The actual filling takes place in a stainless steel tunnel equipped with ultraviolet lights. No human hand takes part at any stage, until the plugs are inserted in the vials. Plugging is done inside an ultraviolet irradiated chamber with only the sterile-gloved hand of the operator inside.

Aureomycin is now available in a number of convenient forms, for use locally and by mouth. New forms of this antibiotic of unsurpassed versatility are constantly being perfected.

Capsules: *Bottles of 25, 50 mg. each capsule. Bottles of 16, 250 mg. each capsule.*
Ophthalmic: *Vials of 25 mg. with dropper; solution prepared by adding 5 cc. of distilled water.*

LEDERLE LABORATORIES DIVISION *American Cyanamid Company* 30 Rockefeller Plaza, New York 20, N. Y.

Most easily tolerated, most effective in simple iron-deficiency anemias

A quick look at the literature shows that leading hematologists prefer Feosol. That is because it is (1) easily tolerated, and (2) grain for grain, the most effective form of oral iron.

Feosol—the Tablets and the Elixir—affords adequate dosage of ferrous sulfate at a cost to your patient of only a few cents a day. That's another reason why Feosol Tablets and Feosol Elixir are the standard forms of iron therapy.

Smith, Kline & French Laboratories, Philadelphia

Each 2 fluid drams (2 teaspoonfuls) of Feosol Elixir supplies 5 grains ferrous sulfate—approximately equivalent to 1 Feosol Tablet.



Feosol Tablets

Feosol Elixir

'Feosol' T. M. Reg. U.S. Pat. Off.

the standard forms of iron therapy



NEW **DOUBLE** antibiotic action

with a single **3** *cc. injection*

Combiotic P-S

Penicillin and dihydroStreptomycin

providing:

crystalline procaine penicillin G *for prolonged action*	*300.000 units*
buffered crystalline sodium penicillin G *for fast action*	*100.000 units*
dihydrostreptomycin (as the sulfate) *for broadened therapeutic effect*	*1 Gram*

prepared with ease, by the addition of sterile aqueous diluent

administered intramuscularly in single injections of 3 cc., usually q. 12 h.

effective against sensitive pathogens of the Gram-positive and Gram-negative groups

indicated in bacterial endocarditis, particularly Gram-negative and penicillin-resistant infections; urinary tract infections, including acute gonococcal urethritis; secondary upper respiratory infections; surgical prophylaxis; and in certain other infections of mixed bacterial origin

Antibiotic Division **Pfizer** CHAS. PFIZER & CO., INC., *Brooklyn 6, N.Y.*

When the diagnosis is Cystitis

First:

consider



ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

to establish and maintain urinary antisepsis...

Four properties, in particular, make MANDELAMINE* a drug of choice whenever a diagnosis of urinary-tract infection has been made. MANDELAMINE has a wide therapeutic range, it retains its potency (even against organisms which have become resistant to other drugs), and it is relatively safe and simple to use.

Never are such properties more desirable than in the treatment of cystitis. It is therefore not surprising to find MANDELAMINE used widely, and with excellent results, in this disease (*cf.* Lowsley, O. S., and Kirwin, T. J.: Clinical Urology. Baltimore, The Williams and Wilkins Company, 1944; vol. 2, p. 1178).

MANDELAMINE is also indicated in pyelitis, prostatitis, nonspecific urethritis, and infections associated with urinary calculi or neurogenic bladder, as well as for pre- and postoperative prophylaxis in urologic surgery.

MANDELAMINE is available in bottles of 120, 500, and 1,000 enteric-coated tablets, through all prescription pharmacies. Literature and samples on request.

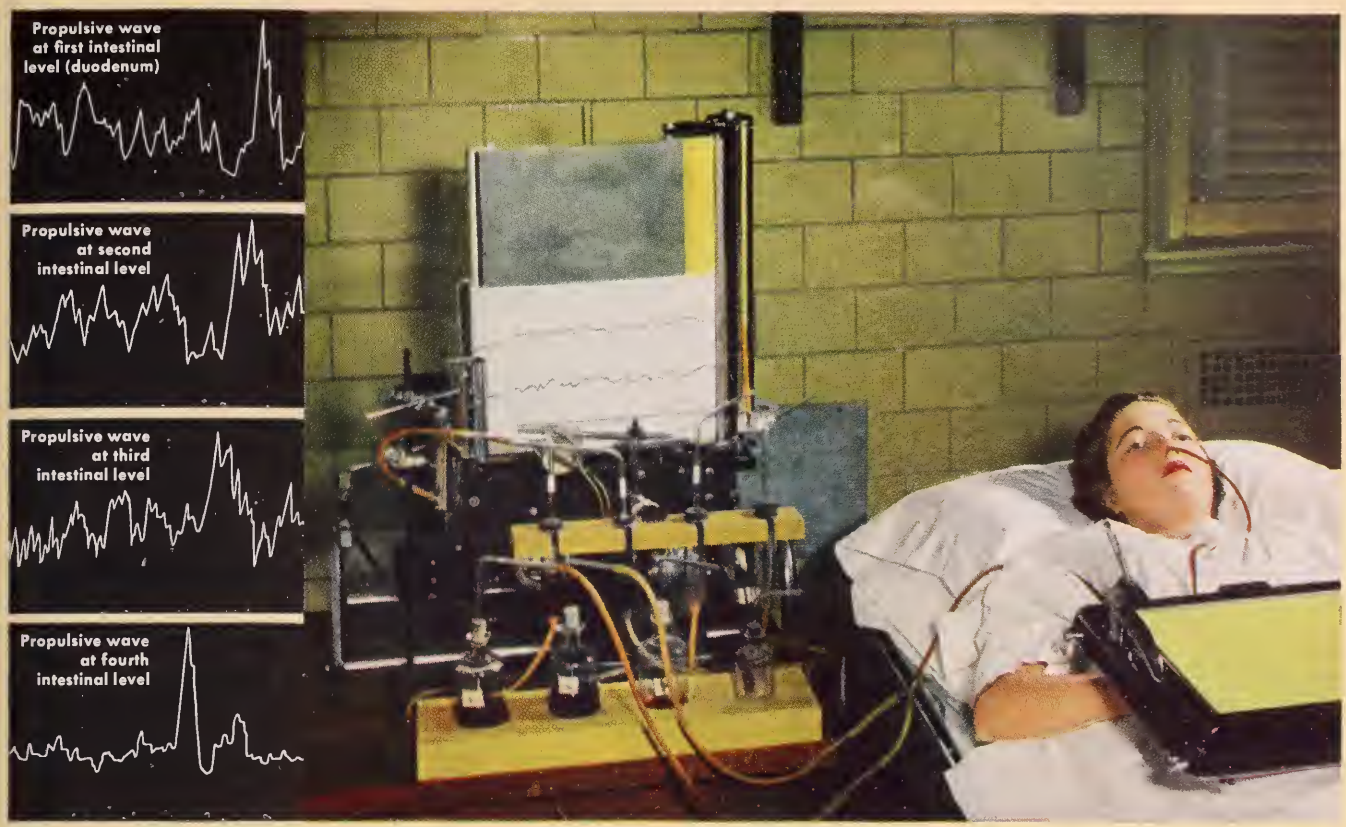
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Pharmaceutical Manufacturers

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*MANDELAMINE is the registered trademark of Nepera Chemical Co., Inc., for its brand of methenamine mandelate.



Spasmolysis at its Best . . . by

LIVING TEST

Intubation studies[1,2,3] increasingly confirm the findings of controlled clinical tests and broad professional experience; they dramatically demonstrate the *marked superiority of natural belladonna alkaloids* over the synthetics in relieving smooth muscle spasm.[2,3]

Donnatal employs precise proportions of the principal alkaloids of belladonna, together with a minimal phenobarbital dosage, to intensify the belladonna effects and help correct emotional factors contributing to the provocation of spasm.



REFERENCES: 1. Chapman, W. P., Rowlands, E. N., and Jones, C. M.: New England J. Med., 243:1, 1950. 2. Kramer, P. and Ingelfinger, F. J.: Med. Clin. North America, 32:1227, 1948. 3. Posey, E. L., Bargen, J. A., and Dearing, W. H.: Gastroenterol., 11:344, 1948.

FORMULA: Each tablet, each capsule, and each 5 cc. (1 teaspoonful) of Elixir, contains 0.1037 mg. hyoscyamine sulfate, 0.0194 mg. atropine sulfate, 0.0065 mg. hyoscine hydrobromide, and 16.2 mg. (¼ gr.) phenobarbital.

A. H. ROBINS CO., INC., RICHMOND 20, VA.



Donnatal®

Robins

TABLETS • CAPSULES • ELIXIR

WHENEVER and WHEREVER spasm of smooth muscle causes pain or dysfunction

First aid for the *"digestive casualty"*

Entozyme greatly simplifies a broad therapeutic approach to many often complex disturbances of the gastro-intestinal tract, through its provision of potent amounts of the principal digestive enzymes: pepsin, pancreatin (with its lipase, amylase, and trypsin), and bile. Its special "tablet-within-a-tablet" construction controls the release of each essential digestive enzyme at its own appropriate gastro-enteric level... in its optimal state of enzymatic activity. This unique action explains the relief gratifyingly elicited in so many cases of pathologic or functional impairment of the digestive process.[1,2,3]

REFERENCES: 1. Kammandel, H. et al.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps. (in press). 2. McGavack, T. H. and Klotz, S. D.: Bull. N. Y. Med. Coll., Flower & Fifth Ave. Hosps., 9:61, 1946. 3. Weissberg, J. et al.: Am. J. Dig. Dis., 15:332, 1948.

FORMULA: Each tablet contains 300 mg. pancreatin, U.S.P., 250 mg. pepsin N.F., and 150 mg. bile salts.

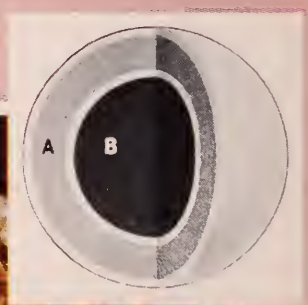
A. H. ROBINS CO., INC., RICHMOND 20, VA.

ENTOZYME®

Robins

A SINGULARLY effective, DOUBLE-layered tablet, with TRIPLE-enzyme digestive action.

Gastro-soluble enzymes are released from outer shell (A) *in stomach; entero-active enzymes from inner core* (B) *in duodenum and jejunum.*





how the Paredrine in Par-Pen helps its penicillin fight intranasal infection

Council-accepted Paredrine Hydrobromide produces rapid and prolonged shrinkage of nasal mucosa. The nasal passages are opened so that the penicillin can "get through" to the infected areas. Bacteriostasis is thereby facilitated.

Paredrine does not break down the penicillin. Par-Pen remains at full therapeutic potency for an entire week—even when kept at room temperature.

Par-Pen contains crystalline potassium penicillin G, 5000 units per cc.; Paredrine Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%; in a specially buffered isotonic aqueous solution. Packaged in ½ fl. oz. bottles.

Smith, Kline & French Laboratories, Philadelphia



Par-Pen

the penicillin-vasoconstrictor for intranasal use

'Paredrine' & 'Par-Pen' T.M. Reg. U.S. Pat. Off.



guarding against megaloblastic anemia

a new product



Inadequate vitamin C in infant feeding often leads not only to scurvy but also to megaloblastic anemia.[1] BREMIL—newest product of Borden research—guards against these grave nutritional complications by providing three times the recommended daily allowance[2] for vitamin C in the reliquefied quart.

Appreciation of the importance of infantile megaloblastic anemia begins with the classic description of the syndrome by Zuelzer and Ogden.[3] May, et al., observe that megaloblastic anemia "has been reported frequently as a complication of scurvy."[1] They also report concerning their own work: "When vitamin C was provided adequately, the diets tested did not lead to megaloblastic anemia."[1]

Careless formula preparation or simply failure to give the required vitamin C when prescribed often explains the inadequacy in vitamin C intake. Physicians will therefore appreciate particularly the fact that BREMIL provides more than ample ascorbic acid. And, of course, BREMIL meets similar requirements for vitamins A, B, and D, riboflavin and niacin.

moreover . . . an adequate provision of vitamin C is not the only attribute that makes BREMIL new and unique

BREMIL is a completely modified milk in which the calcium-phosphorus ratio (1½:1) is adjusted to the pattern of human milk, thus helping to prevent hypertonicity, hyperirritability and other tetanic symptoms in infants.[4,5] BREMIL has the fatty acid and amino acid patterns of human milk . . . the same carbohydrate (lactose) . . . more iron . . . a soft, flocculent curd of small particle size comparable to human milk . . . complete solubility.

BREMIL can be mixed for a single feeding or a 24-hour period. Formula preparation is as rapid as with a liquid product. Moreover, BREMIL does not settle out on standing. Standard dilution is 1 level tablespoonful and 2 fl. oz. water, although BREMIL can be either concentrated or diluted. Each level tablespoonful BREMIL powder supplies 44 calories.

Complete information and a trial supply may be obtained upon request.

BREMIL is available in drugstores in 1 lb. cans.

1. May, C. D., et al.: *Am. J. Dis. Child. 80:191, 1950.*
2. Recommended Daily Dietary Allowances, Rev. 1948, Food and Nutrition Board, National Research Council.
3. Zuelzer, W. W., and Ogden, F. N.: *Am. J. Dis. Child. 71:211, 1946.*
4. Gardner, L. I., Butler, A. M., et al.: *Pediatrics 5:228, 1950.*
5. Nesbit, H. T.: *Texas State J. M. 38:551, 1943.*

flexible, palatable, easy to prepare **Bremil®** *powdered infant food*

Prescription Products Division

The Borden Company, *350 Madison Avenue, New York 17*



in hypogenitalism

and

primary amenorrhea

"...'Premarin' given in a cyclic fashion for several months may bring about striking adolescent changes..."* in the sexually undeveloped girl.

"PREMARIN"®

Estrogenic Substances (water-soluble)
also known as Conjugated Estrogens (equine)
Tablets and Liquid

Highly Effective • Well Tolerated • Naturally Occurring • Orally Active

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*Hamblen, E. C.: North Carolina M. J. 7:533 (Oct.) 1946

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The Cardiologist~ is assured of

Dependability in Digitalis Administration

Being the powdered leaves made into
physiologically tested pills,
all that Digitalis can do, these pills will do.

Trial package and literature sent to physicians on request.

DAVIES, ROSE & COMPANY, Limited

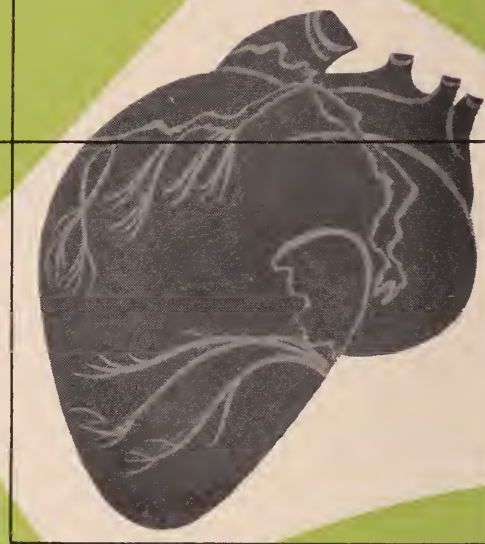
Manufacturing Chemists, Boston 18, Massachusetts

D14

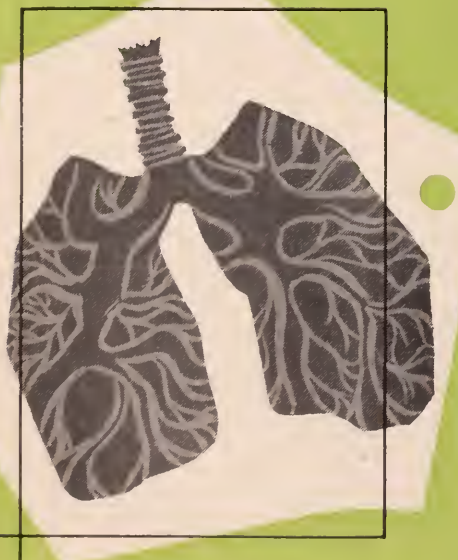
SPECIFICALLY •



IN RHEUMATOID ARTHRITIS



IN RHEUMATIC FEVER



IN BRONCHIAL ASTHMA AND OTHER HYPERSENSITIVITIES



IN THE NEPHROTIC SYNDROME

· PHYSIOLOGIC

Administration of ACTHAR initiates a chain of physiologic mechanisms in the service of preventing or correcting fundamental manifestations of disease.

ACTHAR, the specific pituitary stimulant hormone for the adrenal cortex, causes the adrenal glands to synthesize and secrete the entire spectrum of corticoids. These powerful physiologic agents control the mobilization and utilization of energy, inhibit cellular injury, and prevent or reverse the concomitant inflammatory reaction—a basic manifestation common to a wide variety of diseases.

Established Indications: Collagen diseases or connective tissue diseases, such as rheumatoid arthritis, rheumatic fever, acute lupus erythematosus; hypersensitivities, such as severe asthma, drug sensitivities, contact dermatitis; most acute inflammatory diseases of the eye; acute inflammatory conditions of the skin, such as acute pemphigus and exfoliative dermatitis; inflammatory conditions of the intestinal mucosa, such as ulcerative colitis; and metabolic diseases, such as acute gouty arthritis and secondary adrenal cortical hypofunction.

Literature and directions for administration of ACTHAR, including contraindications, available on request.

ACTHAR is available in 10, 15, 25 and 40 milligram vials.

ACTHAR

ARMOUR LABORATORIES BRAND OF ADRENOCORTICOTROPIC HORMONE (A.C.T.H.)

THE ARMOUR LABORATORIES

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

FOR THE FIRST TIME

aqueous natural vitamin A in capsules

AQUASOL A CAPSULES
is the first and only product to provide water-soluble natural vitamin A in capsules . . . and is made by the "oil-in-water" technique developed in the Research Laboratories of the U. S. Vitamin Corporation (U. S. Pat. 2,417,299).

AQUASOL A CAPSULES

two potencies:

25,000 U. S. P. Units
natural vitamin A per capsule
. . . in water-soluble form

50,000 U. S. P. Units
natural vitamin A per capsule
. . . in water-soluble form

advantages:

up to 500% greater absorption

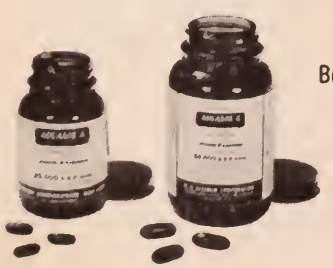
80% less excretion

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indications:

for more rapid, more effective therapy in all vitamin A deficiencies . . . particularly those associated with conditions characterized by poor fat absorption (dysfunction of the liver, pancreas, biliary tract and intestines; celiac and other diarrheal diseases).

Proven effective in ACNE and other dermal lesions responsive to high potency vitamin A.



Bottles of 100, 500 and 1000 capsules

Samples upon request

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"Oh, Sleep,

it is a gentle thing"



CARBRITAL brings calm repose and restful sleep to tense and sleepless patients. Combining rapid hypnotic effect with gentle prolonged sedation, residual depression or "hang-over" is unlikely following its administration. For insomnia, nervous tension, preoperative and obstetrical sedation, CARBRITAL Kapseals® and Elixir facilitate individualized medication.

CARBRITAL®

EACH CARBRITAL KAPSEAL CONTAINS

Pentobarbital Sodium . . . . . 1½ grains
Carbromal . . . . . 4 grains

Also available as CARBRITAL Kapseals (half-strength) each containing ¾ grain Pentobarbital and 2 grains Carbromal.

EACH FLUID OUNCE OF CARBRITAL ELIXIR CONTAINS

Pentobarbital Sodium . . . . . 2 grains
Carbromal . . . . . 6 grains

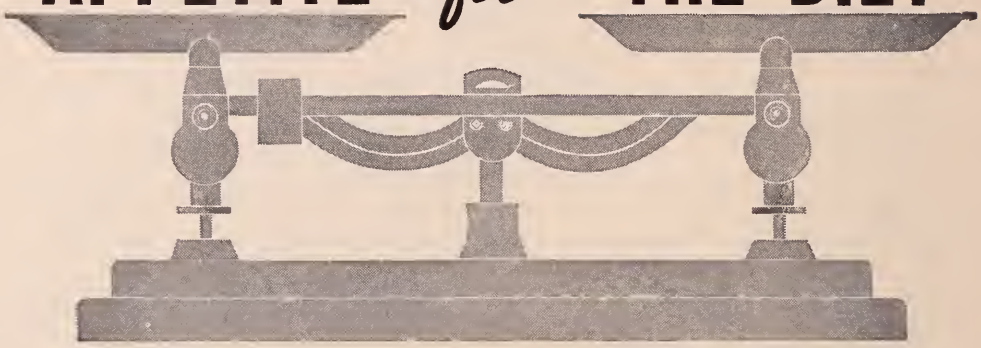
Dosage: *Adults*—1 or more Kapseals as required; 1 to 4 teaspoonfuls or more of the Elixir as required. (Each teaspoonful of CARBRITAL Elixir contains ¼ grain Pentobarbital Sodium and ¾ grain Carbromal.) *Children*—½ to 1 teaspoonful according to age and condition.

CARBRITAL Kapseals and CARBRITAL Kapseals (Half-strength) are available in bottles of 100 and 1000; CARBRITAL Elixir in 16-ounce bottles.

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA · P D & CO.

to make the **APPETITE** *fit* **THE DIET**



It is well known that the craving for food which besets many obese people cannot easily be controlled by the will alone. For them, adherence to a reducing diet often imposes a nervous strain, with consequent tension and irritability; and if they succumb to their urge to eat more, they have a sense of failure.

But appetite can now be modified by oral administration of 'Methedrine'. Then avoidance of over-eating becomes practically effortless, and the patient feels fitter and cheerful, as well as satisfied . . . with his meals and with his achievement.

Trials have shown that 'Methedrine' is a reliable anorexiant, and that it is effective in low dosage.

Literature describing dosage and recommended regimen will be sent on request.

REFERENCES:

Ray, H. M.: Am. J. Digest. Dis., *14*:153, 1947.
Shapiro, S.: ibid, *14*:261, 1947.

'METHEDRINE'® brand

Methamphetamine Hydrochloride (d-Desoxyephedrine Hydrochloride)

Compressed products of 5 mg.—Scored to facilitate division.

BURROUGHS WELLCOME & CO., (U.S.A.) INC. TUCKAHOE 7, NEW YORK

because it contains 'Benzedrine' Sulfate . . .

'EDRISAL with CODEINE'

does far more than relieve pain in

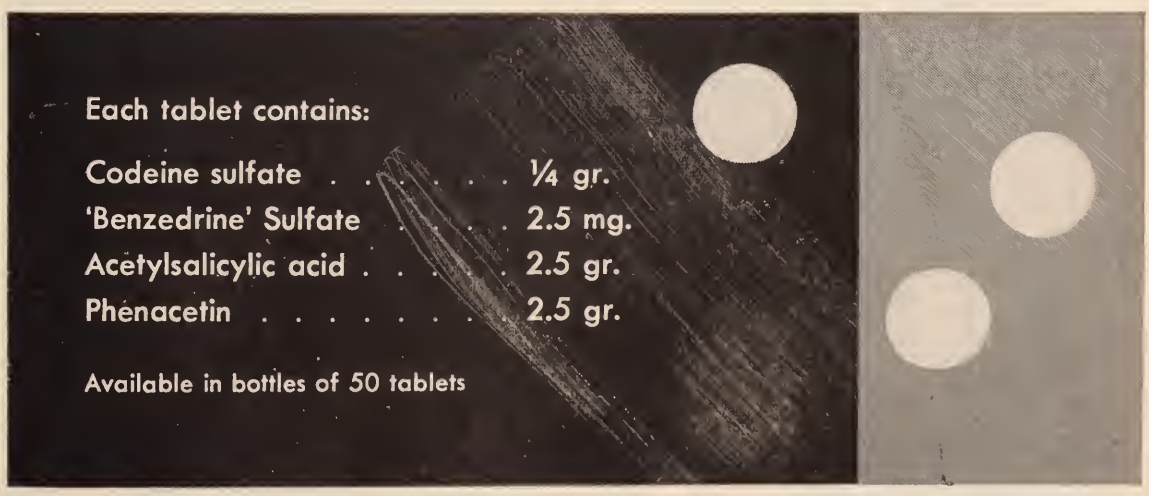
severe dysmenorrhea

It relieves depression. The *antidepressant* activity of 'Benzedrine' Sulfate averts the all-too-familiar depressant effect of codeine. It actually lifts the patient's mood.

And relieves cramps. The *peripheral* activity of 'Benzedrine' Sulfate works to relieve the cramps that are so often associated with this painful period. Janney reports:

> "The most satisfactory antispasmodic drug for use in spastic dysmenorrhea is, in my experience, Benzedrine Sulfate . . ."[1]

Important: 'EDRISAL with CODEINE' does not replace familiar 'Edrisal'. 'EDRISAL with CODEINE' is for use in conditions that require more potent analgesia.



Smith, Kline & French Laboratories, Philadelphia

1. Janney, J. C.: Medical Gynecology, ed. 2, Philadelphia, W. B. Saunders Company, 1950, p. 365

'Edrisal' and 'Benzedrine' T.M. Reg. U.S. Pat. Off.

"...the only drug we have seen that allays anxiety without clouding consciousness"

J.A.M.A. *140*:672 (June 25) 1949



Tolserol *(Squibb Mephenesin)*

- to alleviate pronounced anxiety and tension
- as an adjunct in the treatment of chronic alcoholics

DOSAGE

In anxiety tension states:

As little as 0.5 Gm., given orally every few hours, has produced a good response. However, for optimum effect, 0.75 Gm. or more is given several times a day.

As an adjunct in the treatment of chronic alcoholics:

As much as 3 Gm. orally every four hours has been found useful in the acute stage. This dosage is reduced when the patient becomes more manageable. (If Tolserol is given too soon after the patient drank alcohol, the toxic effect of the alcohol may be potentiated. For this reason, Tolserol should not be administered until six hours have elapsed since the patient drank alcohol.)

Tablets, 0.5 Gm., 0.25 Gm.; *Capsules*, 0.25 Gm.;
Elixir, 0.1 Gm. per cc.; *Solution*, 2% (intravenous).

Tolserol *(Squibb Mephenesin)*

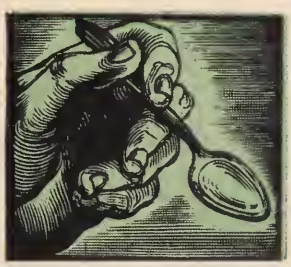
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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

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White's

Dram-cillin with Triple Sulfonamides

- *wide spectrum of antibacterial action*
- *additive and possibly synergistic antibacterial potency*
- *markedly greater safety in systemic sulfonamide therapy*
- *apparent reduction in hypersensitive reactions*
- *less possibility of development of drug-resistant organisms*



excellent flavor, convenience and economy for the patient.

Each teaspoonful (5 cc.) supplies:

100,000 units buffered penicillin G potassium

.167 Gm. Sulfadiazine

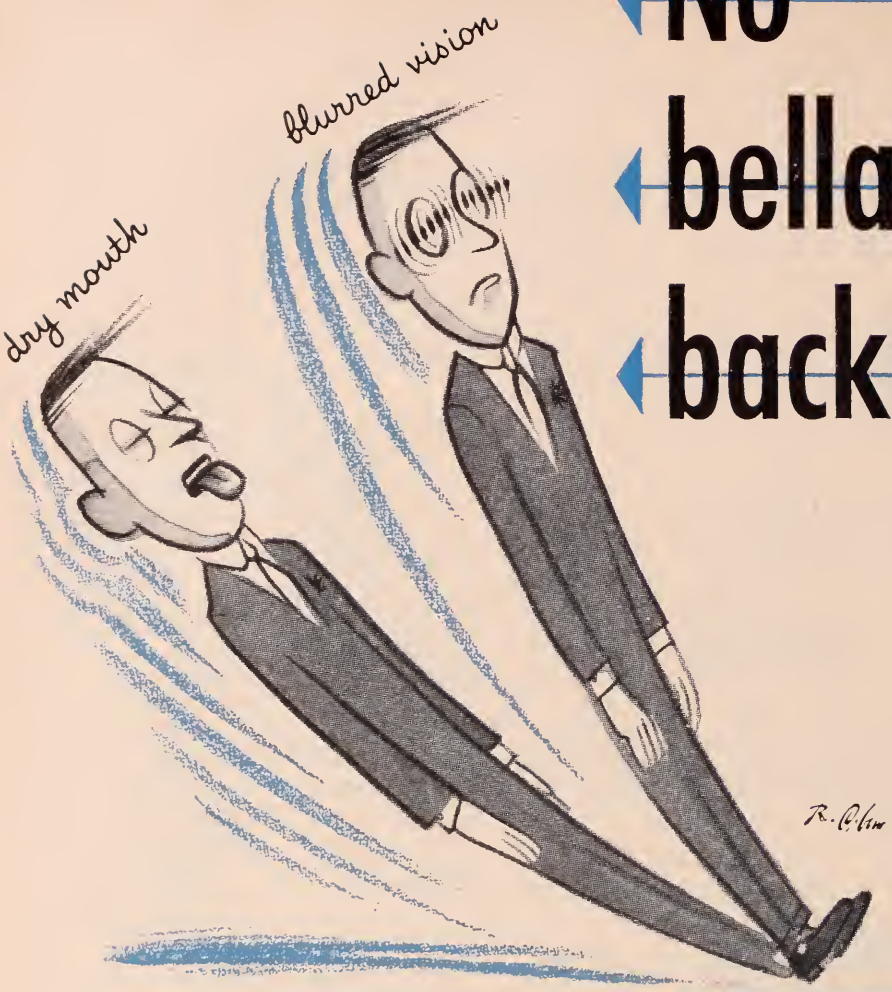
.167 Gm. Sulfamerazine

.167 Gm. SULFACETIMIDE—the sulfonamide of choice for the *third* component

- *Supplied:* In 60 cc. bottles containing 1,200,000 units of penicillin G potassium and 6 Gm. of triple sulfonamide mixture.

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No belladonna backfire...



when you relieve
nervous indigestion with . . . . . **BENTYL**
SAFE, DOUBLE-SPASMOLYSIS

Clinical [1,2,3] and pharmacological results show that the dual action of BENTYL (musculotropic, neurotropic) provides complete and more comfortable relief than that of all other antispasmodics tested.

DOSAGE: Two capsules three times daily, before or after meals. If necessary, repeat dose at bedtime.

BENTYL . . . . . 10 mg.
for comfortable relief of nervous indigestion

BENTYL . . . . . 10 mg.
with **PHENOBARBITAL** . . . . . 15 mg.
when synergistic sedation is desired

1. Hock, C.W.: J. Med. Assn. Ga. 40: Jan., 1951
2. Hufford, A.R.: J. Mich. St. Med. Soc. 49:1308, 1950
3. Chamberlain, D.T.: Gastroenterology 17: Feb., 1951

Merrell 1828

Trade-mark "Bentyl" Hydrochloride

New York — CINCINNATI — Toronto



"pins and needles" of dysmenorrhea

Many of your patients are on "pins and needles" just before and during menstruation because of the nervous and emotional upset, mental anguish and physical suffering which accompany such common complaints as dysmenorrhea and premenstrual tension. You'll find that in many cases the use of Progestoral (anhydro-hydroxy-progesterone)—Organon's orally effective form of the luteal hormone—will provide for your patients rapid and effective relief from these distressing menstrual disorders which so frequently interfere with women's occupational tasks and home life. Usually you need prescribe only 10 mg of Progestoral per day during the last 7 to 10 days of the cycle to provide relief from premenstrual tension and dysmenorrhea. Progestoral is available in 5-mg, 10-mg, and 25-mg tablets.

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THE BLOOD PRESSURE DROPS



Through reduction of peripheral resistance, Veriloid produces a significant drop in arterial tension. Not only is that large group of patients with moderate hypertension benefited, but also patients with severe essential and malignant hypertension. The average dose of from 2.0 to 5.0 mg. four times daily after meals and at bedtime usually suffices, although individualization of dosage is essential for maximum therapeutic efficacy and avoidance of nausea.



VERILOID* Now Available in 3 Tablet Sizes

Veriloid, a unique biologically standardized fraction of Veratrum viride, is now available in 3 dosage units for maximum economy —1 mg., 2 mg., and 3 mg. tablets; bottles of 100, 500, and 1000.

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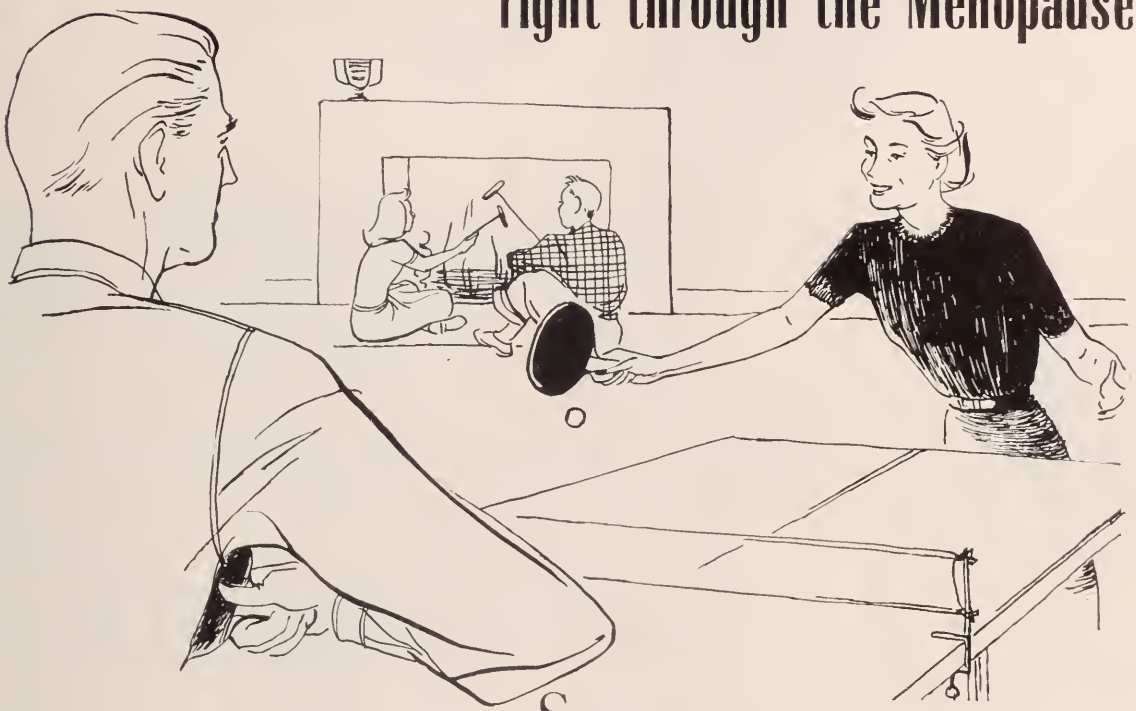
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TRADE MARK

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How many of your patients
suffer
from symptoms of premenstrual tension

Adequate Therapy is at last available...

The symptoms of headache, nervousness, backache, abdominal distention and malaise, which accompany the altered hormone-water-balance state of the premenstrual period, have been found to yield dramatically to the administration of—



M-MINUS 4 combines in each tablet 50 mg. of N,N-Dimethyl-N'-(2-pyridyl)-N'-(p-methoxybenzyl) ethylenediamine 8-bromotheophyllinate [pyrabrom]—with 100 mg. of acetophenetidin, the dependable, safe analgesic. M-MINUS 4 brings marked relief of symptoms, and, in many instances, shows evidence of correction of water-retention.

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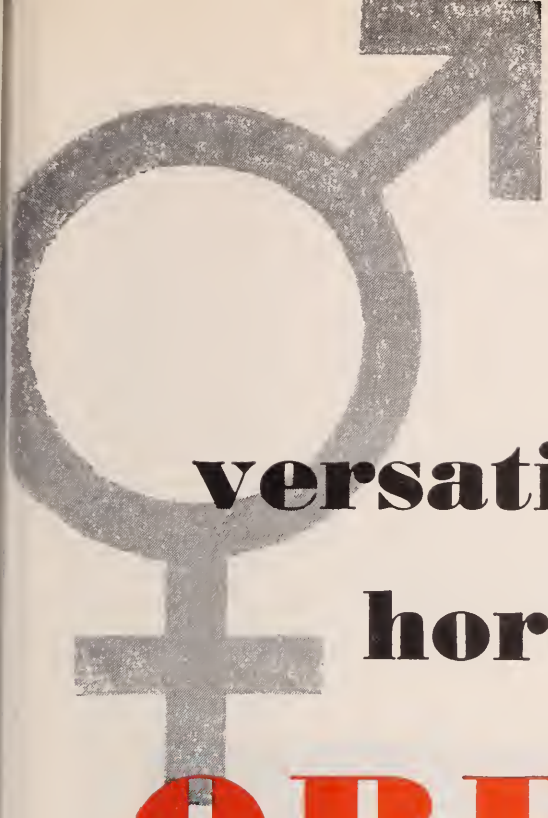
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—Wetzel, N. C., et al., Science 110:65

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LITERATURE AND SAMPLES ON REQUEST

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(Testosterone Propionate U.S.P.)

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"... it has been demonstrated repeatedly that the oral route is as effective as the parenteral route when adequate doses of penicillin are used."

Keefer, Chester S.: Am. J. Med. 7:216

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The unusually palatable liquid penicillins for oral use

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Among the many indications are:

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The multivitamin preparation of therapeutic proportions without fishy after-taste.

Prescribe THERA-VITA* 'Warner' to meet increased vitamin requirements and to facilitate recovery in viral or bacterial respiratory tract infections and debilitating disorders. Also for *intensive therapy* of vitamin deficiencies encountered in allergic disorders, pregnancy, postoperative convalescence, inadequate diet, hyperthyroidism, gastrointestinal disturbances, metabolic disorders.

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1. **ESSENAMINE POWDER UNFLAVORED** is virtually tasteless . . . bland . . . micronized powder . . . blends well with milk, fruit and vegetable juices, broths, meat loaf, baked goods, custards, puddings, ice cream, etc. Cooking does not impair its value.

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Essenamine Powder *(UNFLAVORED)*, 7½ and 14 oz. glass jars.

Essenamine Compound Powder (VANILLIN FLAVOR), 7½ oz. glass jars.

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Raising pain's threshold is Phenaphen with Codeine's business! Its efficacy is directly attributable to the potentiating

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Furacin Vaginal Suppositories are being used preoperatively to eradicate accessible bacterial infections of the cervix and vagina.

Postoperatively, following hysterectomy or conization of the cervix, their use facilitates primary healing by controlling the surface infection. Likewise, they can decrease greatly the slough, drainage and malodor.

Furacin is stable at body temperature —remains effective in the presence of exudates—is bactericidal to a wide variety of gram-negative and gram-positive pathogens.



Furacin® Vaginal Suppositories

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TO MINIMIZE MALODOR
TO FACILITATE HEALING

Furacin Vaginal Suppositories contain Furacin 0.2%, brand of nitrofurazone N.N.R. in a base which is self-emulsifying in vaginal fluids and which clings tenaciously to the mucosa. Each suppository is hermetically sealed in foil which is leak-proof even in hot weather. They are stable and simple to use.

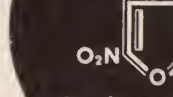
These suppositories are indicated for bacterial cervicitis and vaginitis, pre- and postoperatively in cervical and vaginal surgery.

Literature on request



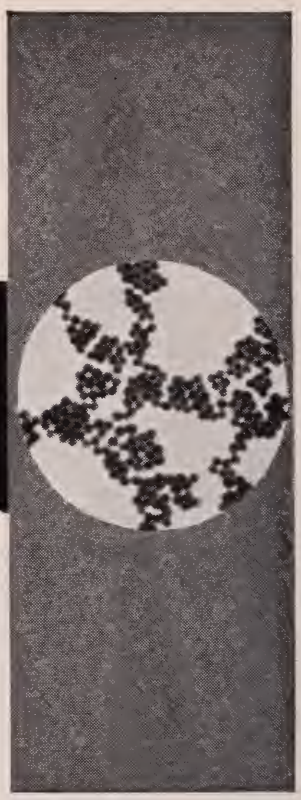
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A unique class of antimicrobials

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Drilitol*

anti-bacterial • anti-allergic • decongestive

Drilitol is the only nose drop effective against both gram-negative and gram-positive pathogens. It contains *two* potent and synergistic antibiotics:

Polymyxin (new) . . . . . **anti-gram negative**
Gramicidin . . . . . **anti-gram positive**

The antibacterial spectrum of Drilitol is extremely wide. And, because Drilitol is both bacteriostatic *and bactericidal*, infection is controlled much more rapidly than if it were only bacteriostatic.

Drilitol also contains an efficient antihistaminic, thenylpyramine, and an effective vasoconstrictor, Council-accepted 'Paredrine'* Hydrobromide.

Drilitol will help you reduce the duration, severity and complications of many common intranasal infections.

Dosage: Adults: Three or four drops (1 dropperful) in each nostril, 4 or 5 times a day, not oftener than once every 2 hours.

Children: ½ the adult dosage.

Available: In ½ fl. oz. bottles with special dropper that delivers the adult dose.

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Formula: Drilitol is a stable, isotonic, aqueous solution containing gramicidin, 0.005%; polymyxin B sulfate, 500 units/cc.; thenylpyramine hydrochloride, 0.2%; 'Paredrine' Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%. Preserved with thimerosal, 1:100,000.



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One spring day, just seventy-five years ago, Colonel Eli Lilly's young son hung a wicker basket on his arm and hurried out of his father's little shop to deliver the first order of Lilly pharmaceuticals. That basket cradled an infant production which has so grown that it now contributes to the health of the world. Such growth of an enterprise and of its benefits is possible only in a favorable economic climate. The opportunity for small businesses to succeed is essential to the continued prosperity and strength of America and to the ultimate welfare of all people.



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The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

Harold M. Camp, EDITOR. Theodore R. Van Dellen, ASSOCIATE EDITOR.

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Vol. 99, No. 3 March, 1951

ANTICOAGULANTS

The usefulness of the anticoagulants depends upon the ability of the laboratory to perform accurate clotting and prothrombin time. Without these tests it is impossible to avoid the dangers of thrombosis on the one hand and hemorrhage on the other. The use of heparin and dicumarol should not be attempted therefore unless good laboratory service is available.

Heparin is a normal constituent of the body. It acts directly upon the blood and when taken in moderate doses affects the clotting but not the prothrombin time. It does not, however, change the bleeding time. The drug is given parenterally and is ineffective when administered by mouth. Heparin acts immediately but the effect is temporary. When too much has been administered through error, an antidote is available in the form of protamine.

The dosage of heparin is judged easily by its effect upon the clotting time. The test is not difficult but must be done according to instructions in order to obtain uniform results. A faulty venipuncture, for example, may alter the results by 10 to 15 minutes. The response to heparin varies with the individual. There are hyporeactors and hyperreactors and the effect of the drug may be altered by anesthesia, operations, surgical convalescence, or thrombotic conditions.

At the present time there are three ways of administering the drug. The continuous intravenous injection provides a closer control over the action of the drug; there are no periods of incoagulability alternating with periods of nearly normal clotting. Approximately 20 mg. of heparin is administered every hour to establish a clotting time of 15 minutes. Some recommend using 200 mg. in 100 cc. of saline solution. This is infused at the rate of 30 drops a minute until the clotting time reaches 15 minutes and then reduced to maintain the clotting time at this level. The second method is to administer heparin in four daily doses. Fifty milligrams is given three times during the course of the day starting at 8:00 a.m. The fourth dose is 100 mg. and is usually administered at 8:00 p.m. This makes a total of 250 mg. for 24 hours. In some instances it is necessary to give three doses of 75 mg. and one of 125 mg. to obtain the desired results. Heparin also is available in mixtures (Pitkin menstrum and Depo-heparin) to prolong absorption. Products of this nature are given every 8 to 24 hours with a satisfactory effect upon the clotting time.

Dicumarol has the advantage of being active when taken orally. The accepted dose is 200 to 300 mg. initially, followed by a single daily dose thereafter. The amount administered in the daily dose depends upon the prothrombin level

which is usually taken each morning before the drug is administered. The objection to dicumarol is the latent period of 24 to 48 hours before the drug begins to act. In addition, the prothrombin time may remain prolonged for as long as 10 days after dicumarol therapy is stopped. These disadvantages stem from the action of the drug upon the liver. It prevents prothrombin synthesis. The drug is not easily controlled and when over-doses are given inadvertently, hemorrhage may occur. The antidote for overdosage is fresh blood. Large doses of vitamin K neutralize the action of the drug experimentally but are of less value as an antidote clinically.

THE GOOSE THAT LAID THE GOLDEN EGG

The modern medical college is not in the same financial status as it was two decades ago. According to Dean F. Smiley, Secretary of the Association of American Medical Colleges, $150,000 to $250,000 was an ample annual operating budget for the average medical school twenty years ago. Nowadays $750,000 may not be enough. The private schools are hit the hardest because the rising costs and increased taxation have reduced endowment gifts. In addition, the income from securities has been decreased through low interest rates. State institutions are more fortunate, but rising costs have compelled the various state legislatures to reduce appropriations for medical study and research. Tuition helps to defray expenses but medical schools are unable to support themselves from this source of revenue alone. Fifteen million dollars received from tuition last year provided only about 22.5 per cent of the total budget ($67,500,000) of our schools. This included cost of plant maintenance and contributions to teaching costs in affiliated hospitals.

With the cost of medical education on the increase, the Deans have been forced to work harder and harder to meet their budget. The $500,000 allotted by the American Medical Association is a pittance compared with the annual budget of $67,500,000. There is a limit also as to how much the tuition can be raised. One school is considering a plan of accepting only students who will sign notes repaying to the school the full costs of their education over a period of twelve and one-half years. This amount is between $8,000 and $12,000 and payments will begin six years after receiving their degree. It resembles a signed agreement to pay "alumni" dues in large denominations. Another suggestion is that every graduate pay $100.00 annually to his alma mater. This plan deserves serious consideration.

Government funds are the alternative. The shortcomings of this plan are obvious but many of the Deans have found that since they cannot squeeze blood from a turnip they may be forced to dip their fingers into the Government tills to keep out of the red. In a recent poll, all but eight medical schools (4 private & 4 state) stated that they would be willing to accept funds from this source for teaching and research purposes. It is hard to criticize them considering the poor response from alumni and other sources. Here is anthor example of how the physician may be forced to come to the rescue of institutions that are the very foundation of our system of free enterprise. This is more imminent today than ever before, especially in a time of emergency. We cannot allow the staffs of medical schools to be depleted nor essential research projects to be shelved because the organization lacks adequate financial support. This problem needs serious consideration by the medical profession. It is hoped that they will respond to obviate the necessity of the school accepting Federal aid and all that would naturally follow such a course.

DANVILLE'S NUMBER ONE CITIZEN OF 1950

Each year the city of Danville, Illinois selects its number one citizen of the year. A secret committee of the American Business Club selected Dr. Harlan English as the first citizen for 1950. Doctor English was guest of honor at the annual testimonial dinner held February 15, in the First Presbyterian Community Room. On the basis of public letters of nomination, Doctor English was the 18th Danville man to be accorded the first citizen honor.

For a number of years, Doctor English has been a member of the Council of the Illinois State Medical Society for the eighth district, and has functioned well in this capacity. He is chairman of the Society's Committee on Rural Health, and he primarily was responsible for the Student Loan Plan adopted jointly by the Illinois

State Medical Society and the Illinois Agricultural Association. He is also a member of the Illinois delegation to the American Medical Association House of Delegates.

During the 16 years Doctor English has been in practice at Danville, he has assumed many local responsibilities, among which are county wide school health examination and immunization program, which he organized and personally directed for two years. He is chairman of the Board of Directors of the Vermilion County Tuberculosis Hospital, and was one of the originators of the local blood bank.

This is the first time the award has been given to a Danville physician. It seems most fitting and proper that the activities of an outstanding physician in the community should be recognized by the citizenry as a whole, and he be publicly acclaimed as the outstanding citizen of the year. We recall that only a short time ago the city of Mt. Vernon, Illinois likewise gave the honor of being the citizen of the year to a distinguished physician, Andy Hall, who later was selected as the outstanding general practitioner of the nation for 1950.

It is much better to recognize the achievements of such men while they are alive and still active, rather than to memorialize their deeds and efforts after they are gone, and we commend the good people of Danville for selecting Harlan English as their first citizen for 1950.

ILLINOIS HOST NEXT YEAR TO MEDICAL SERVICE SESSION

"Nothing like our government has ever been tried before in human history," Donald J. Cowling, president emeritus of Carleton College, Northfield, Minn., told the National Conference on Medical Service at the Palmer House, Chicago, February 11.

"Our government is tailormade for the good of the governed," Dr. Cowling explained. "The people who made it were religious and it was rooted in their belief that, under the fatherhood of God, man is the center of all ultimate values.

"Its uniqueness is shown by the fact that only one-half of one per cent of the 200,000,000,000 people estimated to have lived on earth in the last 2,000 years have lived in freedom as we understand it in the United States today."

Dr. Cowling pointed out that the last article of the Bill of Rights — the Xth Amendment to the Constitution — reserved to the states "or to the people" all powers not specifically delegated to the federal government.

Today, he said, the federal government is reaching out for more and more of these powers, which the Constitution never intended it should have, over the lives and welfare of the people. He called for re-education of the American mind to freedom — to keep our citizens believing in the ultimate perfection of their own basic religious and political philosophy.

The Conference — 24th annual session of its kind — was the biggest and best yet staged, some 275 representatives of every state attended.

That fact was of great interest to the large delegation from Illinois, for the Illinois State Medical Society will play host to the meeting in 1952, as Wisconsin did this year.

Dr. Harlan English of Danville, a councilor of the Society and chairman of its Committee on Rural Medical Service was named secretary for the 1952 meeting. He will have to extend himself to set a higher record than Wisconsin's.

Dr. R. D. Bernard of Des Moines, Ia., served as chairman. The speakers included:

Dr. Robert H. Flinn of Washington, deputy surgeon general of the Public Health Service, who emphasized the importance of medical leadership in civil defense.

Dr. Howard A. Rusk of New York, chairman of the Health Resources Advisory Committee of the National Security Resources Board, and of the national Advisory Committee of Selective Service, who outlined the history and status of procurement of medical personnel for the armed forces.

E. H. O'Connor of Chicago, managing directory of the Insurance Economics Society of America, who spoke effectively on the doctor's case against socialized medicine.

Dr. George F. Lull, secretary of the American Medical Association, who explained the financial operations of the A.M.A. and what is being done with the $25 dues.

Dr. Cowling's inspiring talk was delivered at the luncheon session.

The afternoon opened with a panel discussion of the changing relationship between hospital and physician by Joe Norby of Milwaukee, administrator of Columbia Hospital, and Mac F. Cahal of Kansas City, Mo., executive secretary of the American Academy of General Practice.

Dr. Joseph S. Lawrence of Washington, director of the A.M.A. office there, described the medical and related bills before Congress.

Dr. Willard Wright of Williston, N.D., member of the State Board of Medical Examiners, discussed the training of physicians from unapproved foreign schools.

Leo E. Brown of Chicago, executive secretary of the Student American Medical Association, outlined the progress of the new organization.

Several question and discussion periods heightened the interest of the audience.

IODIZED SALTS IN GOITER PROPHYLAXIS

. . . Although the use of iodized salt in the United States has been purely optional, it has been the most common method of goiter prophylaxis. In Detroit, school cafeterias used nothing but iodized salt in feeding some 50,000 children for a period of five years. During this time, there was no evidence of any ill effects, and incidence of goiter dropped from 46 to 12 per cent within the period. During the same period similar surveys made in Cleveland, where iodized salt was not used, revealed only a drop from 34 to 30 per cent.

The addition of iodine to the drinking water supply also has been used in a number of different places, particularly in cities of the Great Lakes region. In those communities where this method has been used, there apparently have been no serious side effects, and the prevalence of goiter has been reduced, presumably as a result of the increased ingestion of iodine. *Excerpt: Some Aspects of Thyroid Disease VI., Prevention of Endemic Thyroid Disease, Ernest L. Stebbins, M.D., Baltimore, Md., Tex. S. J. M., Nov.* 1950.

COLDS

Of all the nasal conditions most likely to be allergic in origin, the recurring "cold" is the commonest. The patient's story is usually typical. He catches "cold" easily or, as he puts it, he lives with a "cold." He is scarcely over one before he has another. His nose is always stopped up. He obtains a good deal of mucus when he blows it, not pus, simple clear, thick mucus. He sneezes in the morning and coughs when he goes to bed. Often in the morning he raises a good deal of phlegm, which may gag him, and even make him vomit.

. . .Only treatment directed toward the allergy will relieve the patient with these complaints. Tonsillectomy will not cure it. The physician will find to his chagrin, and the patient to his annoyance, that symptoms have been interrupted only for the duration of the anesthetic. Penicillin by parenteral or aerosol administration, and sulfa drugs, even in large quantities, are equally useless except to clear up any superimposed infection. They will have no effect at all on the underlying allergy. *Excerpt: The Allergic Basis of Certain Otorhinolaryngologic Complaints, Jack R. Anderson, M.D., New Orleans, New Orleans M. S. J., Jan.* 1951.

PRELIMINARY PROGRAM OF THE ILLINOIS STATE MEDICAL SOCIETY ANNUAL MEETING

Hotel Sherman
CHICAGO, ILLINOIS
May 22, 23, 24, 1951

Scientific Programs

General Assembly

Dr. Anders Weigen, Chairman of the Executive Committee of the Committee on Scientific Work, has scheduled papers to be presented before the FOUR sessions of the General Assembly of the 1951 annual meeting. General Assemblies will be held in the Ballroom of the Hotel Sherman on Tuesday morning and afternoon and on Thursday morning and afternoon. (May 22nd and May 24th).

The President's Address, to be given by Dr. Harry M. Hedge, and the Orations in Medicine and in Surgery will be presented before this group. Out of state speakers from each Section and in each specialty, will appear before the General Assembly. The program is keyed to the interests and needs of the general practitioner.

The personnel of the Executive Committee preparing and scheduling these programs is as follows:

Chairman: Anders Weigen, Chicago
Vice-Chairman: George P. Guibor, Chicago
Secretary: Paul F. Fox, Chicago
Assistant Secretary: Armand J. Mauzey, Chicago

TUESDAY, MAY 22, 1951

Ballroom of The Sherman

9:00-9:10 Opening of the 1951 Annual Meeting, Harry M. Hedge, President, Chicago

9:10-9:30—"Diagnosis and Management of Congenital Heart Disease." Stanley Gibson, Emeritus Professor of Pediatrics, Northwestern University Medical School, Chief Cardiologist, Children's Memorial Hospital, Chicago

9:30-9:50—"Surgical Aspect of Congenital Heart Disease." Willis J. Potts, Chief of Surgery, Children's Memorial Hospital, Chicago

9:50-10:20—RECESS for viewing scientific and technical exhibits

10:20-10:50—"The Practicing Physician and Public Health." Walter L. Bierring, State Health Commissioner of Iowa, Des Moines.

10:50-11:20—PRESIDENT'S ADDRESS "FAITH"—Harry M. Hedge, Chicago

11:20-12:05—ORATION IN SURGERY—"Operations for Arterial Coronary Disease." Claude S. Beck, Professor of Neurosurgery, Western Reserve University School of Medicine, Cleveland

Afternoon Session

1:30-1:50—"Common Complaints in Obstetrics and Gynecology." W. C. Scrivner, East St. Louis

1:50-2:10—"Medical Aspects of Nuclear Energy." Robert V. Atz, Decatur, Illinois

2:10-2:40—"Our Experiences in Infant Feedings Without Added Carbohydrates." Lloyd E. Harris, Rochester Child Health Institute, Rochester, Minnesota

2:40-3:10—RECESS for viewing scientific and technical exhibits.

3:10-3:30—"Surgical Lesions of the Oesophagus." Charles B. Puestow, Clinical Professor of Surgery, University of Illinois College of Medicine, Chicago

3:30-4:00—"Effects of Bomb and Blast Injuries." Elbert DeCoursey, Colonel, Army Medical Center, Washington, D. C.

4:00-4:20—"Management and Outlook of Coronary Disease." Robert S. Berghoff, Clinical Professor of Medicine, Stritch School of Medicine, Loyola University, Chicago

4:20-4:40—To be announced.

THURSDAY, MAY 24, 1951

Ballroom of The Sherman

9:00-9:20—"Further Observations on the Treatment of Bulbar Poliomyelitis as a Problem in Respiratory Obstruction." Martin H. Seifert and Thomas Gallaway, Chicago

9:20-9:50—"Fundus Changes Seen in Hypertension." Harold G. Scheie, Assistant Professor of Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, Pa.

9:50-10:10—"Meningitis." Archibald L. Hoyne, Emeritus Professor of Pediatrics, University of Illinois College of Medicine, Chicago

10:10-10:40—RECESS to view scientific and technical exhibits

10:40-11:10—"Evaluation of Antibiotic Therapy." Chester S. Keefer, Wade Professor of Medicine, Boston University School of Medicine, Boston, Massachusetts

11:10-11:30—"Bronchoscopic Problems in the New Born." Paul H. Holinger, Associate Professor of Otolaryngology, University of Illinois College of Medicine, and Kenneth Johnson, Chicago

11:30-12:00—"Surgical Lesions of the Stomach." James T. Priestley, Associate Professor of Surgery, University of Minnesota Medical School, Rochester, Minnesota

Afternoon Session

1:30-2:00—"Complications of the Puerperium." Conrad Green Collins, Associate Professor of Obstetrics and Professor of Gynecology, Tulane University of Louisiana School of Medicine, New Orleans

2:00-2:45—ORATION IN MEDICINE: "Coronary Artery Disease." William D. Stroud, Professor of Cardiology, University of Pennsylvania School of Medicine, Philadelphia

2:45-3:15—RECESS to view scientific and technical exhibits

3:15-3:35—"The Use of Laboratory Procedures in Following Therapy with Cortisone and ACTH" Rachmeil Levine, Michael Reese Hospital, Chicago

3:35-4:05—"Uses of Radio-active Iodine in Medicine" Earl R. Miller, Professor of Radiology, University of California Medical School, Berkeley, California

4:05-4:25—"Comments on Adrenal Cortex in Systemic Disease." Allan T. Kenyon, Professor of Medicine, University of Chicago School of Medicine, Chicago

4:25—To be announced.

Section Programs

On Wednesday, May 23, several of the Sections plan to have independent section meetings. These meetings will be held in the Hotel Sherman with the following over-all plan:

Medicine and Surgery will not have special Section Meetings

Eye, Ear, Nose and Throat will meet from 9:00 to 11:30 and from 2:00 to 5:30

Preventive Medicine and Public Health will meet Wednesday afternoon

Pediatrics and Obstetrics and Gynecology — Wednesday afternoon

Pathology — Wednesday morning

Radiology — Wednesday afternoon

Pediatrics — Wednesday morning

The Illinois Chapter of the American Academy of Pediatrics will have its annual luncheon Wednesday noon, May 23.

SECTION ON EYE, EAR, NOSE AND THROAT

William A. McNichols, Dixon.....Chairman
George P. Guibor, Chicago.....Secretary

WEDNESDAY, MAY 23, 1951

9:00-9:20—"Present Day Management of Deafness" George E. Shambaugh, Jr., Chicago

9:20-9:40—"Traumatic Injuries of the Cornea" J. A. Johnson, Mt. Vernon

9:40-10:00—"Management of Choanal Polyps" Arthur Loewy and Irving Sokolsky, Chicago

10:00-10:20—"Wound Closure Following Cataract Surgery" Harold G. Scheie, Guest of Honor, Philadelphia, Pennsylvania

11:00-11:20—Business Meeting

11:20- RECESS to view scientific and technical exhibits

Afternoon Session

2:00-2:20—"Eye Infections and Injuries in Chemical and Atomic Warfare" Roland I. Pritikin, Rockford

2:20-2:40—"Pitfalls Occurring in Reconstructive Surgery of the Nose" John Nicholson, Chicago

2:40-3:00—"Five Year Survey of Nasopharyngeal Tumors" Irwin D. Horwitz, Chicago

3:00-3:20—"Indications for Keratectomy" Richard Perritt, Chicago

3:20-3:40—"A Statistical Survey of Dental Foreign Bodies Removed from the Lungs and Esophagus" Elmer Hagens, Chicago

3:40-4:00—"Indications and Technique for Using Replacement Grafts for Loss of Nasal Tip" Oscar Becker, Chicago

4:00-4:20—"Treatment of Anterior Laryngeal Stenosis by Tantalum Plate Implant" Albert Andrews and Marvin J. Tamari, Chicago

4:20-4:40—"Rose Thorn Penetrating the Cornea and Anterior Chamber" E. A. Pushkin and Thomas D. Allen, Chicago

4:40-5:00—"Practical Details in the Removal of Foreign Bodies from the Eye — Statistical Report" Louis Rampona, Chicago

5:00-5:20—"Results of Visional Survey in Oak Park Schools" Palmer Good, Oak Park

SECTION ON PEDIATRICS

WEDNESDAY MORNING, MAY 23, 1951

Anders J. Weigen, Chairman . . . . . Chicago
Howard R. Miller, Secretary . . . . . Peoria

9:00-9:20—"A Resume of the Proprietary Infant Foods" Herman F. Meyer, Associate Professor, Pediatrics, Northwestern University Medical School, Chicago

9:20-9:40—"Articular Disease in Childhood" J. B. Richmond, Professor of Pediatrics, University of Illinois College of Medicine, Chicago

9:40-10:00—"Meningitis in Infants" John A. Bigler, Professor and Head of the Department of Pediatrics, Northwestern University Medical School, Chicago

10:00-10:20—"Muscle Weakness in Children" Douglas Buchanan, Associate Professor, University of Chicago Medical School, Attending Neurologist, Children's Memorial Hospital, Chicago

JOINT SESSION

SECTION ON OBSTETRICS AND GYNECOLOGY and SECTION ON PEDIATRICS

WEDNESDAY AFTERNOON, MAY 23, 1951

Obstetrics and Gynecology:
Worling R. Young, Chairman .....Geneseo
Armand J. Mauzey, Secretary .....Chicago

Pediatrics:
Anders J. Weigen, Chairman.....Chicago
Howard R. Miller, Secretary .....Peoria

2:00-2:30—"A Natural Child-birth by Relaxation: A Report of 169 Cases" Harold W. Miller, Chicago

3:00-3:30—"A Report of Experience in "Rooming-in" of Mother and Baby in Hospital"

SECTION ON RADIOLOGY

Theodore J. Wachowski, Wheaton ....Chairman
Willard C. Smullen, Decatur .....Secretary

WEDNESDAY AFTERNOON, MAY 23, 1951

The Section on Radiology plans to have its customary film reading session on Wednesday afternoon, with the guest of honor from out of state acting as the moderator.

The out of state guest will also appear before the General Assembly to present a paper of general interest.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

WEDNESDAY AFTERNOON, MAY 23, 1951

Dale E. Scholz, Chairman.....Chicago
Felix A. Tornabene, Secretary.....Aurora

SECTION ON PATHOLOGY

WEDNESDAY MORNING, MAY 23, 1951

Granville A. Bennett, Chairman .....Chicago
Coye C. Mason, Secretary.....Aurora

9:00-9:20 "Myocardial Infarction" William Wartman

9:20-9:30 Discussion

9:30-9:50 "Indeterminate Pulmonary Lesions" William E. Adams

9:50-10:00 Discussion

10:00-10:20 "Responsibility of the Hospital Pathologist" Edwin F. Hirsch

10:20-10:30 Discussion

10:30-10:50 "Tumors of the Parotid Gland" George Milles

10:50-11:00 Discussion

11:00-11:45 Title to be announced Frank Konzelmann

DON'T FAIL TO SEE THE SCIENTIFIC EXHIBITS AND SCIENTIFIC MOVIES THEY ARE "KEYED" TO THE GENERAL PRACTIONER AND ARE A POST-GRADUATE COURSE IN AN EASY "TAKE-HOME" PACKAGE

PHYSIOLOGY OF LIVER CLEARANCE
IRON DEFICIENCY ANEMIAS
MANAGEMENT OF VARICOSE VEINS
DIET AND ARTERIOSCLEROSIS
STEROIDS IN TREATMENT OF CANCER
HEMATOLOGIC PROBLEMS
FRESH TISSUE DEMONSTRATION
OFFICE GYNECOLOGY ALLERGY AND ALCOHOLISM
. . . . . AND MANY OTHERS

COMMITTEE ON SCIENTIFIC EXHIBITS
C. C. Mason, M.D., Chairman
H. A. Flack, M.D.
A. M. Vaughn, M.D.
L. W. Peterson, M.D.
D. E. Clark, M.D.
L. M. Zimmerman, M.D.

Other Groups Will Hold Meetings

The Illinois Obstetrical and Gynecological Society will have a pre-convention meeting at the Hotel Sherman on Monday, May 21. Dr. C. Otis Smith, as President, has notified this office that program material will be sent in for the April issue of the Illinois Medical Journal. The officers of this group for 1951 are:

President: C. Otis Smith, Oak Park
President Elect: R. R. Loar, Bloomington
Vice President: J. K. Hanson, Moline
Secretary: G. H. Edwards, Pinckneyville
Treasurer: George B. Callahan, Waukegan

The Illinois Chapter of the American Academy of Pediatrics will have an annual luncheon of the Chapter at the Hotel Sherman at 12:00 noon on Wednesday, May 23, 1951. Physicians who are interested are cordially invited to attend. Officers are:

President: John L. Reichert, Chicago
Vice-President: Gerald M. Cline, Bloomington
Secretary: Samuel J. Hoffman, Chicago
Treasurer: Harry L. Faulkner, Chicago

Diplomates of the National Board of Medical Examiners

A luncheon meeting of the Associated Diplomates of the National Board of Medical Examiners will be held in conjunction with the annual meeting of the Illinois State Medical Society on Tuesday, May 22 at the Hotel Sherman, Chicago, in one of the private Club Rooms.

For reservations please write to Dr. Willard O. Thompson, 700 North Michigan Avenue, Chicago 11, Illinois.

Darrell H. Trumpe, Springfield, has been appointed Chairman of the Arrangements Committee for the annual meeting of the Illinois Chapter, American College of Chest Physicians. The group will have a program consisting of three or four papers on diseases of the chest or related subjects; if it is at all possible, they will try to have one out of state speaker. The final program will be published in the April issue of the Illinois Medical Journal.

The Physicians' Association of the Illinois Department of Public Welfare will have a scientific program on Wednesday morning, May 23. Dr. I. Spinka, Clinical Director of the Chicago State Hospital has assured us that their program material will be prepared and ready for publication with our final program to appear in next month's Journal. This group has held annual meetings with the Illinois State Medical Society for many years; their papers have been published in the Journal, and the scientific session has contributed materially in this field of mental health.

Alumni Luncheons

The Loyola University Alumni Association (G. G. Grant, S. J., Secretary) has been contacted relative to an alumni luncheon for the graduates of the Stritch School of Medicine.

We expect to have the University of Illinois Alumni luncheon again this year, and the Phi Chi Fraternity will also get together during the annual meeting for a luncheon session.

Woman's Auxiliary

A most cordial invitation is extended to every doctor's wife to attend the 23rd annual convention of the Woman's Auxiliary to the Illinois State Medical Society May 22nd and 23rd at the LaSalle Hotel, Chicago.

Mrs. Henry Christiansen is Convention Chairman with Mrs. Eugene McEnery as Co-Chairman. They and their committees are arranging a most entertaining program.

On the serious side we invite you to attend the business meetings. Here you will learn of the real achievements of the past year and also of the plans and program for the year ahead.

The Convention will open at 10:00 a.m. Tuesday, May 22. Please note the change of time — this year our Convention will be a half day longer to allow more time for the County President's Reports and the Question and Answer period which will be moderated by a Past State President. Bring your questions and problems — this period will be rewarding with its interchange of ideas and projects.

Convention plans are still in the formative state, but from all indications this will be one of our biggest Auxiliary Conventions. Luncheons, dinners and tours will be planned which should make the meeting a happy as well as an instructive one.

PLAN NOW TO ATTEND. If you wish to stay at Headquarters, make your hotel reservations early. We look forward to seeing you May 22 and 23 in Chicago.

Additional convention information will appear in the April issue of the Illinois Medical Journal.

The Technical Exhibitors

Again this year, the technical exhibitors will bring to the physicians of Illinois WHAT'S NEW IN MEDICINE.

Research, medical progress, improved equipment, will all be brought together for the benefit of those in attendance.

Representatives of these companies call on you during the year; take this opportunity to call at these booths during our meeting.

Remember these firms. They are contributing to the success of the 1951 annual meeting of the Illinois State Medical Society. Cooperate with them in every way possible.

ABBOTT LABORATORIES, North Chicago, Illinois ..... Booth 3
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AMERICANA CORPORATION, 333 North Michigan Avenue, Chicago, Illinois ..... Booth 52
THE ARMOUR LABORATORIES, 520 North Michigan Avenue, Chicago, Illinois ..... Booths 60-61
AYERST, McKENNA & HARRISON, LTD., 22 East 40 Street, New York, N.Y. ..... Booth 5

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A. C. BARNES COMPANY, 100 Park Avenue, New York, N. Y. ..... Booth 16
BLUE CROSS PLAN FOR HOSPITAL CARE, 425 North Michigan Ave., Chicago, Illinois ..... Booth 17
THE BORDEN COMPANY, 350 Madison Avenue, New York, New York ..... Booth 84

CAMBRIDGE INSTRUMENT CO., Grand Central Terminal, New York, N. Y. ..... Booth 56
CAMEL CIGARETTES, One Pershing Square, New York, N. Y. ..... Booths 27-28
CARNATION COMPANY, Box 2035; Wilshire-LaBrea Station, Los Angeles, California ..... Booth 19
CHICAGO DIETETIC SUPPLY HOUSE, 1748 West Van Buren Street, Chicago, Illinois ..... Booth 24
CHICAGO PHARMACAL COMPANY, 5547 North Ravenswood Avenue, Chicago, Illinois ..... Booth 39
CHICAGO X-RAY SALES COMPANY, 3832 N. Lincoln Avenue, Chicago, Illinois ..... Booths 35-36
CIBA PHARMACEUTICAL PRODUCTS, Inc., 556 Morris Avenue, Summit, New Jersey ..... Booth 80
THE COCA-COLA COMPANY, P. O. Drawer 1734, Atlanta, Georgia ..... Booth 14
COMMERCIAL SOLVENTS CORP., 17 East 42nd Street, New York, N. Y. ..... Booths 69-70
CORECO RESEACH CORP., 1908 Broadway, New York, N. Y. ..... Booth 43

DANIEL SURGICAL & MEDICAL SUPPLIES, 3144 N. Naragansett Ave., Chicago, Illinois ..... Booth 15
F. A. DAVIS COMPANY, 1914 Cherry Street, Philadelphia, Pa. ..... Booth 73
THE DENVER CHEMICAL MFG. CO., 163 Varick Street, New York, N. Y. ..... Booth 76
DOAK COMPANY, Inc., 15812 Waterloo, Cleveland, Ohio ..... Booth 40
DOHO CHEMICAL CORP., 58 Varick Street, New York, N. Y. ..... Booth 77
DOME CHEMICALS INC., 109 West 64th Street, New York, N. Y. ..... Booth 50

EISELE & COMPANY, 500 First Avenue North, Nashville, Tenn. ..... Booth 23
ELI LILLY & COMPANY, Indianapolis, Indiana ..... Booth 71
ENCYCLOPAEDIA BRITANNICA, 20 North Wacker Drive, Chicago, Illinois ..... Booth 25

H. G. FISCHER & CO., 9451 West Belmont Ave., Franklin Park, Illinois ..... Booth 41

GENERAL ELECTRIC X-RAY CORP., 4955 Electric Avenue, Milwaukee, Wisconsin ..... Booth 89
GYNECOLOGICAL SPECIALTIES, Inc., 413 East Broadway, Alton, Illinois ..... Booth 13

HANOVIA CHEMICAL & MFG. CO., 100 Chestnut Avenue, Newark, New Jersey ..... Booth 21
HARROWER LABORATORIES, 930 Neward Avenue, Jersey City, New Jersey ..... Booth 32
HOLLAND-RANTOS COMPANY, Inc., 145 Hudson Street, New York, N. Y. ..... Booth 59

IRWIN, NEISLER & COMPANY, Decatur, Illinois ..... Booth 34

"JUNKET" BRAND FOODS, Little Falls, New York ..... Booth 7

KELLEY-KOETT MANUFACTURING COMPANY, Covington, Kentucky ..... Booth 1

LANTEEN LABORATORIES, Inc., 2020 Greenwood Street, Evanston, Illinois ..... Booth 37
LEDERLE LABORATORIES DIVISION, 30 Rockefeller Plaza, New York, N. Y. ..... Booth 67
J. B. LIPPINCOTT COMPANY, East Washington Square, Philadelphia, Pa. ..... Booth 79

M & R DIETETIC LABORATORIES, 585 Cleveland Avenue, Columbus, Ohio ..... Booth 48
MATERNITY COSMETICS, Inc., 133 Clinton Avenue South, Rochester, N. Y. ..... Booth 45
MEAD JOHNSON & COMPANY, Evansville, Indiana ..... Booth 4
MEDICAL AIDS, INC., 5 North Wabash Avenue, Chicago, Illinois ..... Booth 78
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W. B. SAUNDERS COMPANY, West Washington Square, Philadelphia, Pa. ..... Booth 88
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E. R. SQUIBB & SONS, 3214 Northern Blvd., Long Island City, New York ..... Booths 81-82
STANDARD AIR SERVICE COMPANY, 845 South Wabash Avenue, Chicago, Illinois ..... Booth 83
STANDARD X-RAY COMPANY, 1932 Burling Street, Chicago ..... Booth 8
SUTLIFF & CASE COMPANY, Inc., 201 Spring Street, Peoria, Illinois ..... Booth 72

UNIVERSAL PRODUCTS CORPORATION, Norristown, Pa. ..... Tablespace
U. S. VITAMIN CORPORATION, 250 East 43rd Street, New York, N. Y. ..... Booth 63
THE UPJOHN COMPANY, Kalamazoo, Michigan ..... Booth 9

VAISEY-BRISTOL SHOE CO., Rochester, New York ..... Booth 87
VARICK PHARMACAL COMPANY, 75 Varick Street, New York, N. Y. ..... Booth 86

WESTINGHOUSE ELECTRIC CORP., 20 N. Wacker Drive, Chicago, Illinois ..... Booth 58
WINTHROP-STEARNS, INC., 1450 Broadway, New York, N. Y. ..... Booth 10
WYETH INCORPORATED, 1600 Arch Street, Philadelphia, Pa. ..... Booth 33

THE ZEMMER COMPANY, 3943 Sennott Street, Pittsburgh, Pa. ..... Booth 68

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SOCIETY SOCIAL FUNCTIONS

THE ANNUAL DINNER honoring the retiring President of the Illinois State Medical Society, Dr. Harry M. Hedge, Chicago, will be held in the Ballroom on Wednesday evening, May 23. The immediate Past President, Dr. Walter Stevenson of Quincy, will act as Toastmaster. He will introduce the Past Presidents and guests present at the dinner. The President's Certificate will be presented to Doctor Hedge by the Chairman of the Council, Dr. Charles P. Blair of Monmouth.

On Tuesday evening the SECRETARIES' CONFERENCE dinner meeting will be held at 6:30 p.m. The speaker at this dinner will be Dr. C. Paul White, President-Elect, of Kewanee. The title of his address will be: "Medical Men and their Citizenship Responsibility".

This dinner will be open to all physicians attending the 1951 annual meeting. Dr. Carl F. Steinhoff, Chairman, Advisory Committee on Military Affairs, will also speak, and following his talk, will conduct a question and answer program on the status of physicians under Selective Service, and in relation to our Armed Forces today.

Following this dinner, the annual "Hospitality Hour" will be held. The physicians attending the meeting and the representatives of the technical exhibitors are guests of the Society at a "beer and pretzel" session.

The complimentary Fifty Year Club Luncheon will be held Thursday noon, May 24, with the Chairman, Dr. Andy Hall of Mt. Vernon, in charge as usual. These outstanding men and women in medicine will be the guests of the state society again this year. The luncheon is always a "high spot" in interest at each annual meeting of the Society.

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chairman, John R. Wolff, Co-Chairman, Edwin F. Hirsch, Carroll Birch, Hubert L. Allen, Frederick W. Slobe, Edward W. Cannady, Ford K. Hick, W. Robert Maloney, Roland R. Cross, Alfred P. Bay, Frederic T. Jung.



You And Blue Shield

You, as a physician, are a part of Blue Shield . .so, naturally, you are concerned about it. You are a part of it because Blue Shield is always sponsored by a medical society. In Illinois, at least 51 per cent of the doctors in a county must sign cards as participating physicians, and the county medical society must take official action approving a Blue Shield Plan before it can become operative in that county. So the physicians really underwrite Blue Shield in a moral sense at least; occasionally in a financial sense too—for example, should a Plan get into financial difficulty, physicians might be expected to accept a reduced schedule of allowances; also, in service Plans with a low income limit the doctors may subsidize the Plan partially. The State Department of Insurance considers this backing of Blue Shield by a majority of physicians in a county to be most significant and necessary. Once the cards have been signed, most Blue Shield Plans, if of the idemnity type, make no distinction between a participating physician and one who has not signed the cards, .making payments to all according to the schedule of allowances, the only requirement being that the physician to whom payment is made must be licensed to practice medicine and surgery in all its branches in the state where services are rendered. So you are really a part of Blue Shield whether or not you signed a card because of action taken by your medical society.

You know Blue Shield is an important part of the voluntary insurance movement. It has 16 million members and is growing rapidly. It operates on the not-for-profit principle in order that the maximum percentage of each premium dollar be utilized to pay or help pay for physicians' services. Blue Shield believes in the profit motive in business, in free enterprise, competition and incentive. But the type of protection offered by many private insurance companies in the past did not seem to be a good enough "buy" to the consuming public. And the popularity of Blue Cross was an important factor in influencing medical societies to establish Blue Shield as a companion Plan. Besides, there is room for all in the battle against compulsory health insurance. It is an obvious fact that the competition by Blue Cross and Blue Shield has been a decided influence in effecting improvements by the private insurance companies as regards contractual benefits. These improvements, in turn, act as a constant stimulus to the non-profit Plans.

The result is a steadily expanding service to the public.

You may have wondered why there are several Blue Shield Plans in Illinois. That is simply because county societies in various sections have seen fit to organize their own Plan. .usually in cooperation with a Blue Cross Plan. Those who fear "bigness" and alleged monopoly think this is sound. Others, however, are fearful about this and point to the success in our sister state, Michigan, where the Blue Shield Plan, "Michigan Medical Service", sponsored by the state medical society, has a membership of over 1,900,000 members. They are also concerned about future confusion in overlapping areas within a state, friction, diminished efficiency and impaired public relations as a result.

Of importance to you is the fact that Blue Shield is commonly known as "The Doctors' Own Plan." The responsibility and obligation implied here are obvious. If a Blue Shield Plan is badly administered. .if it gets into financial difficulty—if its contractual provisions are inequitable. .if the physicians do not cooperate. . if the subscribers have legitimate complaints not satisfactorily answered, both the Blue Shield movement and the medical profession suffer. If the doctors' charges are exhorbitant and out of proportion to the patient's ability to pay, the subscriber rightfully feels that membership in Blue Shield has been of no appreciable value because of the disproportion between the Blue Shield allowance and the doctor's fee. The same would apply if a physician, because of his patient's having Blue Shield coverage, increased his usual fee by an amount equal to the Blue Shield allowance. In such instances, the protective value of insurance coverage is lost.

Blue Shield does not fix the doctor's fee (if the Plan is of the indemnity type); and free choice of doctor and hospital are maintained always. Blue Shield does not practice medicine; and it is not within its scope to question either the doctors' charges, operative indications or procedures employed. The medical societies, however, *are* keenly interested; having either initiated or approved the program, they have a responsibility and an obligation too. .and that is why county or state medical societies have professional relations or advisory committees for Blue Shield with the exclusive function of carefully observing the relationship between the physicians, Blue Shield and the public. These committees are concerned about public relations and grievances. They contact physicians by letter or phone and may refer matters to appropriate committees for final disposition.

Since physicians have this responsibility, it follows that they should control Blue Shield Plans and such is the case. The majority of trustees are physicians although lay representation is recognized as an indicated procedure.

The public is the consumer of medical care and the consumer must be protected if the voluntary Plans are to serve their purpose as the chief bulwark against compulsory health insurance.

Blue Shield, then is *your* contribution toward supplying a nonprofit medical care Plan to help pay or pay medical costs. It is *your* contribution to furnish an important component in the voluntary health insurance field. .as opposed to the compulsory political type. So your support is essential. This includes explaining it to your patients, friends and business contacts. Your secretary needs to know about it too. Filling forms out promptly and completely is important. The more information you furnish, the better can the disbursing department of Blue Shield evaluate your cases. There is no violation of confidence involved since every Blue Shield member authorizes this upon joining. And unless your fee is stated, Blue Shield cannot obtain statistics as to what percentage of doctors' bills it pays.

In general, there are two types of Blue Shield Plans—the "indemnity" type and the "service" type.

The Indemity Plans

In the "indemnity" Plans, payments are made to physicians, according to a fixed schedule of allowances, the physician being privileged to charge the patient the difference between his fee and the allowance received. Hence the allowance neither fixes nor bears any relationship to the physicians' charges. There are many, especially leaders of organized labor, who have voiced dissatisfaction with the indemnity principle. The chief objection has been that, where indemnity contracts prevail, too small a percentage of the physicians' fee is covered by the Blue Shield allowance.

This objection might be obviated: (1) if payments under an indemnity scheduled were large enough to equalize the average prevailing

charges; and (2) if physicians, in such instances, would charge the average patient approximately what the Blue Shield allowance amounted to. This would require a moderate increase in subscription rates but appeals to the physician because it does not conflict with his traditional method of practice and billing.

The Service Plans

In the "service" type, where the member or the member's family income does not exceed a stipulated amount, the physician agrees to accept the Blue Shield allowance as payment in full, but is privileged to charge an additional amount of equalize his fee when the family income exceeds the stipulated level. Thus, most service contracts are really a combination of both types --being of a "service" type when family income does not exceed a certain level. . and an "indemnity" type when income does exceed such level.

The "service" Plans appeal to the public because no additional payment need be made to the physician unless the family income exceeds a stipulated amount, in which case the Plan operates on the indemnity principle. Some Plans have more than one service contract with different income limits; for example, $3,000 and $5,000. Selling at different rates, they fit the financial resources of the members; also, the allowances in the latter may range from 30 to 100 per cent higher than in the former. The decision as to income level is usually left to the physicians—sometimes the member is asked to fill out a brief form; rarely is difficulty experienced on this score. If this income level is set at $5,000 for example, it would include about 80 per cent of the population in most communities. . and physicians' fees for this 80 per cent would be fixed at the Blue Shield allowance. This upsets the traditional system and is disquieting to many physicians. There are others who feel that this is part of the physicians' contribution to the battle against socialized medicine. They feel that some change and adjustment is necessary to meet the demands of masses of people despite all our efforts toward education. Physicians are inherently altruistic; monetary gain has never been their motivation; they know that no financial reward can ever be measured to compensate them for having saved a life: they do not expect their services to be compensated on the basis as a lawyer or broker; and many of them are perfectly willing to subsidize a Blue Shield Plan. Financial loss, however, does not appear to accrue where well integrated service Plans are in operation with a high enough income limit and a correspondingly adequate schedule of payments. In such instances, the income of physicians appears to be maintained at the previous level. In this connection, Dr. Louis F. Middlebrook of Connecticut Medical Service has said: "It has been my impression from talking with both Participating Physicians and with Subscribing Member-patients that because of rapid settlement of claims and 100 per cent collections, payments on cases that otherwise would have been Staff cases without remuneration for the physician, and on others which would have been impossible or difficult to collect, the net result has been increased remuneration for the physician and improved services to the patient." One reason for this is a sufficiently high rate to enable payments substantially higher than exists in most indemnity Plans.

The public is invariably enthusiastic about service Plans. People say it is the profession's positive and satisfactory answer to political medicine. The trend is strongly toward the service Plan philosophy and it behooves us to study the matter impartially. We should probably ask ourselves why it should not be successful here if it is successful in other states.

Indeed, the "service" philosophy. .namely, furnishing complete or virtually complete hospital or medical service instead of dollars. . is the unique and most popular feature of most Blue Cross and Blue Shield Plans.

If the Blue Shield Plans in Illinois are successful, it will be largely because of your attitude, understanding and cooperation. Of those favoring compulsory health insurance, some think so because of unfavorable experiences with physicians' charges; others because they believe the average person cannot pay the cost of a hospitalizing illness. The first criticism can be met through education of the profession and in the exceptional, justified case by referral to the Grievance Committee of a medical society. The second criticism can be met by voluntary insurance if most, if not all, of the medical bill is paid and if coverage is available to most of the people. A third requisite is that the rate charged for such coverage is one which the people can afford to pay. It is difficult to reconcile these

needs without having recourse to the "service" type of certificate and rendering available individual as well as group enrollment.

Dr. H. L. Childs has said that the "success of free enterprise system depends upon providing the best possible service to the largest number of people at prices they can afford to pay." This statement is applicable to medical service too. Blue Shield aims to help people do this. How far it will succeed depends on you—F.W.S.

RADIATION SICKNESS

Ionizing radiation is the additional hazard which makes the atom bomb different from the conventional bomb. The estimated deaths caused by ionizing radiation were approximately 15 per cent of the total. It is true that many of the individuals who were killed by blast and burns also had lethal doses of ionizing radiation. However, 85 per cent of the people who died at Hiroshima would have died if no ionizing radiation were present. Let us not underestimate nor attempt to debunk the radiation hazard. The deaths from ionizing radiation at Hiroshima alone amounted to 9,000 people. However, there has been too much emphasis on the ionizing radiation effects in connection with the casualties produced and too little emphasis on the frightful number of individuals who died as a result of the blast and burns. The emphasis which has been placed on the ionizing radiation from the bomb has confused and frightened people to such an extent that many believe that it will be dangerous to enter a bombed community and rescue the wounded. Many people think of the atomic bomb only in terms of its ionizing radiation effects. This is an unfortunate and erroneous concept. We cannot emphasize too strongly that the initial problem is the evacuation and treatment of the blast and burn casualties. Bear in mind that after the detonation of an atomic bomb, such as at Hiroshima and Nagasaki, it is perfectly safe to enter the area and rescue the wounded without fear of exposure from the "residual" radiation. The facts to support this contention will become apparent as we discuss more fully what happens at and after the detonation of an atomic bomb. *Excerpt: Medical Problems in Atomic Warfare, Brig. Gen. James P. Cooney, (MC) USA, Washington, D. C., N. Y. S. J. M., Jan.* 15, 1951.

LEPROSY

Among the ancients, leprosy appears to have been a generic term for many varieties of skin disease, some of which, according to Hebrew tradition, rendered a person ceremonially unclean. Throughout the middle ages the disease prevailed extensively in Europe where the number of sanctuaries is said to have exceeded twenty thousand. At the present time, leprosy is known in Iceland, Norway and Sweden, parts of Russia and of China and India and in certain provinces of Spain and Portugal. In the United States the disease is endemic in Louisiana, Florida, Minnesota, New York and Texas, while in the Dominion of Canada foci exist in New Brunswick, Cape Breton and Nova Scotia. The disease is also endemic in the West Indies and in Mexico, in the Sandwich Islands, the Philippines and Hawaii. *Excerpt: The Clinical Significance of Foreign Body Granulomas: A Review, Douglas Symmers. M.D., New York, J.S.C.M.A., Jan.* 1951.

CORRESPONDENCE



"YOUR MENTAL HOSPITALS" THE CRIMINAL SEXUAL PSYCHOPATH

In the State of Illinois there are statutes for commitment for the epileptic, the mentally defective and the mentally ill persons. In addition to these civil commitments, there are three commitments available under the Criminal Code. The first consists of those charged with felony where the question of insanity is at issue; the other two concern the criminal sexual psychopath.

The first legislation which dealt with sex offenders was passed in Illinois in 1938 and since then a number of states have passed a similar type of legislation. It is an interesting observation that although those who proposed and enacted such legislature recognized that the sexual offense was a symptom of a mental disorder, they were not successful in removing the procedure from the Criminal Code. The definition of a criminal sexual psychopath under the provisions of this Act is a follows:

> Definition.—All persons suffering from a mental disorder, and not insane or feebleminded, which mental disorder had existed for a period of not less than one (1) year, immediately prior to the filing of the petition hereinafter provided for, coupled with criminal propensities to the commission of sex offenses, are hereby declared to be criminal sexual psychopathic persons.

Patients committed under the above Act are sent to the Illinois Security Hospital.

In addition to the above Act, a bill was enacted in the State of Illinois in 1947 which required the penitentiary system to have their inmates reexamined who had been originally sentenced on charges of incest, rape, crime against nature or taking indecent liberties with a child. This examination must take place prior to their release at the expiration of their sentence. If they are felt to be criminal sexual psychopaths they are then to be committed to the Illinois Security county and if in the opinion of these physicians they are criminal sexual psychopaths, they are then to be committed to the Illinois Security Hospital.

There has been considerable discussion concerning the commitment of persons under the above two Acts and considerable clarification is still required as to what actually constitutes a sexual psychopath. It is felt by many psychiatrists that certain definite criteria should be laid down in order to clarify the definition of a sexual psychopath. They stress such important factors as a repetitive, compulsive act, aggressive in nature against minors or an aggressive sexual act against society. It should not include those who are insane or feebleminded nor should an in-

dividual be convicted because of an isolated sexual act. Also, the entire field of therapy of these offenders requires considerable research as little has been accomplished to date.

G. A. Wiltrakis, M.D.
Deputy Director

CLINICS FOR CRIPPLED CHILDREN LISTED FOR APRIL

Doctor Herbert R. Kobes, director of the University of Illinois Division of Services for Crippled Children, has released the Aprli schedule of clinics for physically handicapped children. The Division will conduct 19 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical, social and nursing services. There will be 4 special clinics for children with rheumatic fever and 1 for cerebral palsied children.

Local medical and health organizations, both public and private, cooperate with the Division in providing this clinic service to Illinois' thousands of physically handicapped children. The examining clinicians are selected from private physicians who are certified Board members. Any private physician may refer or bring to a convenient clinic those children for whom he may want examinations or may want to receive consultative services.

The April clinics are:

April 3—E. St. Louis, St. Mary's Hospital
April 4—Elgin, Sherman Hospital
April 4—Shelbyville, Veterans Center
April 4—Alton, Alton Memorial Hospital
April 5—Macomb, St. Francis Hospital
April 10—Peoria, St. Francis Hospital
April 10—Flora, Clay Co. Memorial Hospital
April 11—Hinsdale, Hinsdale Sanitarium
April 12—Cairo, Public Health Building
April 12—Springfield, St. John's Hospital
April 12—Elmhurst (Rheumatic Fever), Memorial Hospital of DuPage County
April 12—Rockford, St. Anthony's Hospital
April 13—Chicago Heights (Rheumatic Fever), St. James Hospital
April 17—Danville, Lake View Hospital
April 17—Pittsfield, Illini Community Hospital
April 18—Chicago Heights, St. James Hospital
April 24—Peoria, St. Francis Hospital
April 24—Effingham (Rheumatic Fever), Douglas Township Bldg.
April 25—Springfield (Cerebral Palsy), Memorial Hospital
April 25—Aurora, Copley Hospital
April 26—Normal, Brokaw Hospital
April 26—Glenview, Village Hall
April 26—Mt. Vernon, Masonic Temple
April 27—Chicago Heights (Rheumatic Fever), St. James Hospital

THE JOSEPH A. CAPPS PRIZE

The Institute of Medicine of Chicago offers a biennial prize of $600 for the most meritorious investigation in medicine or in the specialties of medicine. The investigation may be also in the fundamental sciences, provided the work has a definite bearing on some medical problem.

Eligibility—Competition for 1951 is open to graduates of Chicago medical schools who completed their internship or one year of laboratory work in 1949 or thereafter.

Time Limit—Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, not later than December 31, 1951.

The manuscript, as submitted, of the prize paper is to become the property of the Institute of Medicine of Chicago.

If no paper presented is deemed worthy of the prize, the award may be withheld at the discretion of the Board of Governors.

HOSPITAL SEMINAR MEETING

All physicians are invited to attend an all day seminar which is to be held on Thursday, March 22, 1951 at the Peoria State Hospital, Peoria, Illinois. Outstanding speakers will participate in this program which will be held by the Peoria County Medical Society in conjunction with the Illinois Department of Public Welfare.

The program will be as follows:—

10:00 A.M.
Tour of Peoria State Hospital, including Special Treatment Services

12:00 Noon
Luncheon (guest invited)

1:30 P.M.
"Protruded Intervertebral Discs."
Dr. Eric Oldberg, Professor and Head of Dept. of Neurology and Neurological Surgery, University of Illinois, College of Medicine.

2:30 P.M.
"Indications for Electroshock Therapy"
Dr. Alfred P. Solomon, Clinical Associate Professor of Pychiatry, University of Illinois, College of Medicine.
3:45 P.M.
"The Surgical Treatment of Pain"
Dr. Oscar Sugar, Associate Professor of Neurology, University of Illinois, College of Medicine
5:00 P.M.
Re-dedication of Administration Building in honor of Dr. George Michell
6:00 P.M.
Dinner (Visitors and wives invited)
7:00 P.M.
"Dr. George Zeller, Pioneer"
by Dr. Maxim Pollack, Tuberculosis Section Chief, Veterans Administration, Downey, Illinois
"Common Psychiatric Problems of the General Practitioner"
by Dr. Francis J. Gerty
Professor and Head of the Dept. of Psychiatry, University of Illinois College of Medicine

This program has been arranged under the National Mental Health Act as a joint project of the Illinois State Medical Society, the Illinois Department of Public Health, the United States Public Health Service and the Illinois Department of Public Welfare.

AMERICAN COLLEGE OF PHYSICIANS POSTGRADUATE COURSE NO. 4

This course on Diseases Due to Allergic and Immune Mechanisms, will be conducted at the Hotel Roosevelt, Pittsburgh, Pa., April 24-28, 1951. The course is intended for those interested in Internal Medicine and in Allergy. It will convey an understanding of what has developed recently in the field of applied Immunology, Biochemistry, Hormonal Relations, Immunochemistry and the basic mechanisms of allergic reactions.

A great deal of stress will be placed on the immunological and physiological and pharmacologic bases for the manifestations of these diseases. The course will open on Tuesday, April 24 and continue through Saturday, April 28. Each day will end with a round table discussion, open to faculty and students alike. Suitable accommodations may be procured at the Hotel Roosevelt, Penn Avenue and Sixth Street, Pittsburgh 30, Pa., Mr. Charles R. Wilson, Manager.

Programs and other desired information relative to the course may be obtained by writing to Street, Philadelphia 4, Pa.

Nursing needs have increased in spite of lower death rates, longer life expectancies, and a generally healthier population. The number of people in the United States has increased by an estimated 16,000,000 since the 1940 census. More people are now living to an older age than ever before, and consequently the diseases and disabilities of older people have multiplied. A high standard of living has prevailed since the early years of the war, medical prepayment plans have spread, and public health services have been expanded in many areas. In 1940, 10,087,000 patients were admitted to hospitals in the United States, but by 1948 the number of hospital admissions had risen to 16,422,000. Pub. Health Reports, August 5, 1949, Chesley Bush, M.D., Esta H. McNett, R.N., B.S., Lucile Petry, M.A., and Martha B. Naylor, R.N., B.S.

Health education is the application of measures to induce experiences which favorably influence knowledge, attitudes and actions for the prevention of disease and the perfection of health of the individual members of society. Ira V. Hiscock, Pub. Health News, Feb., 1949.

Surveys have shown as much as four times more active tuberculosis among people 65 to 74 years of age than among the age group 15 to 24. Moreover, it appears that the disease more frequently goes unrecognized in the older population. In the Washington, D. C., survey, only 4 per cent of the older cases processed by the survey (aged 65 and over) were previously known to the health department, as against 25 per cent of the group 34 years of age and under. Journal-Lancet, Robert J. Anderson, M.D., April, 1950.

ORIGINAL ARTICLES



Urological Problems During Pregnancy

Herman L. Kretschmer, M.D., D.Sc.
Chicago

The most frequent urological complication of pregnancy is acute pyelonephritis. Although there has been a great reduction in the number of cases of acute pyelonephritis, recent statistics show that it is still of relatively frequent occurrence. Reported series of pyelonephritis during pregnancy show a variance in the incidence from as low as 0.6 per cent to as high as 16.3 per cent. The majority place the incidence between 1 and 2½ per cent. Out of 2972 deliveries in 1938 at the Boston Lying-In Hospital there were 22 cases of infection of the urinary tract during pregnancy (0.74%). A review of our own records at the Presbyterian Hospital for 10 years prior to 1945 showed 9,802 deliveries and among them there were 31 cases of pyelitis or 0.03%.

During the five year period from 1945 to 1949 inclusive, at the Presbyterian Hospital there were 8,564 deliveries. Of this total there were 5 cases of pyelonephritis—which makes an incidence of less than .05 of one per cent. This substantiates our previous statement that pyelonephritis of pregnacy is a preventable disease.

The urological problems, and the conditions that predispose to them during pregnacy are unique. It is an established fact that certain changes that occur in the urinary tract during pregnancy are physiological and not pathological. They have a definite bearing on the diagnosis and treatment of the pregnant woman from the urologist's point of view.

These changes consist of dilation of the renal pelves, with clubbing of the calyces, dilatation, tortuosity and lateral displacement of the ureters and a marked dilatation of the bladder. These changes predispose to stasis and hence infection.

Some of the normal anatomical and physiological changes which occur are a looseness of structures in the urinary tract, with wide separations in the fibers of the muscular coats of the urinary organs, widening of the submucosal layers, and increased thickness of walls of channels out of proportion to the evidence of hyperplasia. Even the vessels that make up the blood supply to the ureter throughout its course are very much enlarged. Congestion and cyanosis

Read at the Annual Clinical Conference of the Chicago Medical Society, Chicago, Illinois, February 28, March 1-3, 1950.

of the tissues and general hyperemia are characteristic of the urinary organs in pregnancy.

Even the gallbladder is in an atonic state. The bowel is markedly atonic and is pressed upon by the uterus in the middle and last trimesters, as are the ureters. Because the average pregnant woman is constipated to some degree, this bowel atony plays an important part in the etiology of the pregnancy infections of the urinary tract.

ETIOLOGY

Since dilatation with resulting stasis is such an important predisposing factor in the development of acute pyelonephritis, and since this dilatation is present in every pregnant woman, let us consider the mechanism of its development.

Many and varied are the theories advanced over the years to explain the dilatation. At the present time it is believed that the dilatation is due to two factors.

Most observers today believe that the primary cause of the dilatation are the endocrine changes of pregnancy and the second factor is pressure of the gravid uterus on the pelvic brim. Rossi considered a mechanical cause working in conjunction with hormones. Schmitz discussed the relation of hormones of pregnancy to dilatation of ureters and he called attention to Bompianis' experiments on living ureters in which it was found that prolan stimulated, while corpus luteum and follicular hormones paralyzed, or did not affect ureteral peristalsis. Greenhill is specific on this subject. He states: "The muscular hypertrophy and vascular changes may be due to stimulation by estrogen and the increasing atony of the ureters may be due to the relaxing effect of progesterone."

The second most important factor that plays a role in the production of acute pyelonephritis is the pressure of the pregnant uterus against the brim of the pelvis. This pressure obstructs the outflow of urine from the upper channels. The importance of pressure is adequately demonstrated by its prompt disappearance after delivery.

Other factors which have been attributed to producing pregnancy changes in the urinary tract are hyperemia, vascular engorgement and enlargement, hyperplasia of the ureteral musculature, particularly in the lower third of the ureter, the condition of the abdominal wall, parity, rotation of the uterus, age of the patient, asthenia and debility, position of the fetus in utero, toxins of pregnancy, ureteral strictures, neuro-generative changes from pressure against nerves in the pelvis near the uterus, renal ptosis, and deformity of the bony pelvis.

However, present day opinion is that the endocrines and pressure of the pregnant uterus are the most important factors.

FREQUENCY OF THE DILATATION

At the present time it is a well established fact that the dilatation of the upper urinary tract is a constant occurrence. It was formerly thought that it occurred only in cases of pyelitis or eclampsia.

Repeated pyelographic studies have shown that dilatation occurs in 100% of the cases. Schumacher studied 100 pregnancies by intravenous urography and found dilatation of the lumbar ureter in 100% of the cases after the fifth month and that the dilatation increased with the duration of the pregnancy.

Cornell and Warfield found dilatation of the right ureter in every case as early as the fifth month.

Heaney, Ockuley, and I found dilatation present during pregnancy or the puerperium in 100% of our cases. In one case the dilatation was not demonstrable until 16 days after delivery.

DURATION OF THE DILATATION

In the largest majority of cases the dilatation disappears rapidly after the termination of the pregnancy. Studies in the puerperium in our cases showed that in 59.375% (nearly 60%) of the pyelograms there was a return to normal after two weeks. In 34.375%, the pyelograms were normal after six weeks, and the remaining 6.250% were normal after 12 weeks.

Baird in 1936 believed that the puerperal atony is at its greatest height at eight to ten days after delivery. Rupp (1933, 1934, 1936) sets the end of this period at 8 weeks after delivery.

Should the dilatation persist beyond this time, it is probable that the cause was present before the pregnancy and therefore calls for careful complete urological study.

PREDISPOSING FACTORS

Stasis is not the only factor which predisposes to infection. However, the majority of the cases do have stasis.

"Prepared Soil" Factor. Some investigators have concluded that the normal urinary tract tends to clear itself of bacteria without the pro-

duction of infection; that where infection does take place there is some toxin of unknown origin which prepares the tissues of the channels for its implantation; and that stasis alone is not adequate to produce infection.

Constipation. The relationship between lesions of the bowel, such as chronic constipation and cathartic colitis are well established. It may be that this incidence is increased because of the loss of tone of the bowel, the result of endocrine influence during pregnancy. It is for this reason that particular attention must be directed toward the intestinal tract in pregnant women.

Foci of Infection. The role of distant foci of infection must also be borne in mind. For many years we have been impressed with the work of Frank Billings at the Presbyterian Hospital on the role of foci of infection in the production of metastatic disease. Since it has become a routine to remove all foci of infection, there have been fewer cases of pyelitis of pregnancy and fewer cases of abscess of the breast and phlebitis.

Attention to the teeth and tonsils is of utmost importance. In our series of cases infected teeth were present in 51% of the cases. X-rays are not always of value in the diagnosis of apical abscess, since the x-rays may be negative. However, cultures of removed teeth have shown very virulent organisms. With the use of the electropulp tester, there is less possibility of overlooking infection at the roots of the teeth.

Of the 9,802 deliveries at the Presbyterian Hospital for 10 years prior to 1945, 31 cases had pyelitis. The incidence of foci in these cases were as follows:

Teeth	14 incidents
Tonsils	6 incidents
Deep injection of the pharynx	6 incidents
Cold	5 incidents
Constipation	5 incidents
Sore throat	2 incidents
Influenza	2 incidents
Pneumonia	2 incidents
Kidney stone	2 incidents
Cough	1 incident
Chronic appendicitis	1 incident
Respiratory disease	1 incident

A review of the 31 cases showed that 2 case histories were incomplete; there were two cases in which the record failed to mention whether or not foci of infection were present. Thus we have 27 cases available for study. There were 17 patients with one focus; 4 patients with 2 foci; 3 patients with 3 foci; and 2 patients with 4 foci; and 1 patient with 5 foci; so that in 27 patients there were 45 foci of infection.

In some of our cases the patients entered the hospital during an acute attack of pyelonephritis without previous medical supervision. In others, although they were advised in the outpatient department to have their foci of infection removed, they failed to do so. Therefore, it is fair to assume that with cooperation, our incidence in our series could have been still further reduced.

Galloway studied roentgenologically the teeth of 242 pregnant women and found that 36 or 15% had apical infection. Since the removal of foci of infection, he has had fewer cases of pyelitis, mastitis, and toxemia.

One can see that with existing constipation and foci of infection one has everything favorable for the bacterial invasion of dilated channels in pregnant women, and hence the inception of urinary tract infection.

BACTERIA IN URINE IN NORMAL PREGNANCY

Bacteria may be present as the result of an infection which antedated pregnancy, remain uncured from a preceding pregnancy in multiparae, or be acquired as an infection of low virulence in the course of pregnancy. These symptomless conditions bear no relation to the degree of ureteral and pelvic dilatation, and patients with striking degrees of ureteral and pelvic change may proceed to delivery without any evidence of the infection except the presence of bacteria in the urine.

Cultures in normal pregnant women show a preponderance of coccal forms of bacteria. The bacterium most often found in urinary tract infection in pregnancy is Bacillus coli. It is estimated to be the cause of the infection in from 62.3% to 95% of all acute cases. Bacteria of the staphylococcus group are next in frequency, and the streptococcus comes third.

DIAGNOSIS

Diagnosis is based on a history of chills, fever, sweats, pain in the renal area on one or both sides, temperature, and the presence of pus and bacteria in a catheterized bladder specimen. One should remember that pyelonephritis during

pregnancy may mask a renal stone, renal tuberculosis, or other gross lesions of the upper urinary tract. In many instances the true nature of the situation is not recognized because the early symptoms are not distinguished from minor ailments such as the malaise of an acute cold.

In the early onset of acute pyelonephritis, the urine may be negative due to an obstruction in one or the other ureter and after a lapse of 24 or 48 hours, the urine is loaded with pus.

Acute Pyelonephritis, especially when the symptoms are right-sided may be confused with acute appendicitis. It is difficult at times to make this differential diagnosis, especially in a woman who has had several previous attacks of acute pyelonephritis. If after great care, intensive study, and able consultation, one is unable to make a differential diagnosis between acute appendicitis and acute pyelonephritis, one should give the patient the benefit of the doubt and operate.

TREATMENT

Prophylaxis. Pyelonephritis of pregnancy is a preventable disease. Therefore, prevention is of the greatest importance. All foci of infection should be removed and proper bowel management must be instituted. The frequency of foci of infection has already been considered above.

Active Treatment.

1. By far the largest number of cases can be treated conservatively with rest in bed and the free ingestion of fluids, together with a bland diet, with particular attention paid to the bowels.

2. In cases in which the above management fails we can employ sulphonamide compounds, penicillin, streptomycin, aureomycin and chloromycetin. It is important to determine the type of organism present and its sensitivity to the various sulpha compounds and the antibiotics. It is hardly necessary to stress the importance of giving sodium bicarbonate before and during the use of the sulpha compounds.

3. In some cases it may be well to use mandelic acid.

4. In cases where the above mentioned measures fail, the next step in the management is the ureteral catheter. This may be allowed to remain as an indwelling catheter. It should not be permitted to remain in place too long since cases have been reported in which patients have died due to erosion by the catheter of the deep vessels. The pelvis and ureter may be irrigated with water and a solution of 2% silver nitrate instilled.

PYELONEPHRITIS DURING PUERPERIUM

In a small number of cases the patients develop chills, sweats, and pus in the urine after delivery. This has been called pyelitis of the puerperium. It is interesting to note that this condition begins after the delivery. The treatment in no wise differs from that during pregnancy.

CALCULUS DISEASE IN PREGNANCY

Renal and ureteral lithiasis are relatively rare as a complication of pregnancy. Prather and Crabtree found stone present 4 times in 9823 deliveries. Hirst found 2 cases of renal stone in 2101 deliveries. No doubt in most cases the stones were present before the woman became pregnant.

The possible injurious effects of toxemia and infection on the pregnancy are matters that must be carefully considered in each case. In regard to treatment one should be guided by the individual case and the period of gestation.

The treatment of stone in the ureter may be considered under two headings: In one group the symptoms may be so severe that the patient must be operated upon at once. In the second group, in which the calculus is silent, operation may be optional. Even though the calculus is silent there is always the possibility of obstruction with its dangers of infection.

Ureterotomy and removal of the stone can be carried out without interference with the pregnancy.

TUBERCULOSIS IN PREGNANCY

Renal tuberculosis during pregnancy is very uncommon. Once the diagnosis of unilateral renal tuberculosis has been established, nephrectomy should be done . In the presence of bilateral tuberculosis, the pregnancy should be interrupted, because it is believed that pregnancy has an unfavorable influence on the tuberculosis.

TUMORS IN PREGNANCY

Tumors of the kidney complicating pregnancy are very rare. Opinions vary as to the management of these cases. Some believe nephrectomy should be done at once and the pregnancy allowed to continue. Others believe the pregnancy should be terminated at once and nephrectomy carried out.

If the case is entirely hopeless as far as the mother is concerned, operation may be neglected or delayed in the interest of the child.

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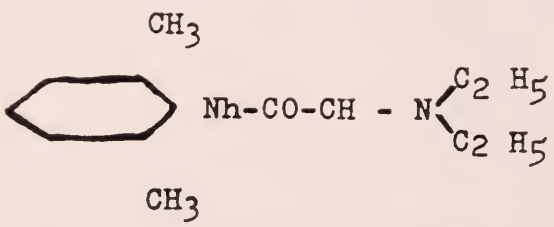
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Xylocaine for Regional Anesthesia

Report on Results in Caudal Block Anesthesia

Goran Haglund* med. lic, and W. Allen Conroy, M.D.†
Chicago

Xylocaine # (diethylaminoacet-2, 6 xylidide Hcl.) was produced in 1943 by Lofgren and



Lundqvist, clinically tested by Goldberg and Gordh in 1944 to 1947 and was put on the Swedish market the last mentioned year. At that time one of us (G.H.), working in the anesthesia department of the University Hospital in Lund, had the opportunity to follow the minor revolution in choice of anesthesia methods, that followed the introduction of this new agent. Many operations and diagnostic procedures, which earlier had been performed under general or spinal anesthesia, were now more and more done under regional anesthesia.

For instance, the frequency of brachial plexus blocks rose from only a couple in 1947 to about one hundred in 1948; and caudal blocks from about twenty to more than one hundred fifty. A similar increase was noticed for other diagnostic, surgical and therapeutic blocks.

The superiority of xylocaine over other block anesthesia agents as shown in this development in the Swedish anesthesia practice, has been confirmed by numerous investigators both in Sweden and the U.S. In summary it can be said that xylocaine in comparison to procaine has the following advantages:

1. Xylocaine is stable in both acid and alkaline solution, and is not decomposed by boiling.
2. Xylocaine has a slight vasoconstrictor effect as compared to the vasodilatator effect of procaine.
3. Although the absolute toxicity of xylocaine

Xylocaine supplied by Astra Pharmaceutical Products, Inc., Worchester, Mass.

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is somewhat greater than that of procaine, there is no doubt that its relative toxicity is considerably lower — in that the dosage required clinically is less.

4. The efficiency of xylocaine in clinical doses is superior to that of procaine:
   a. its time of onset is 2-5 times shorter.
   b. its duration is 2-5 times longer.
   c. anesthesia intensity is greater.
   d. its penetration and diffusion power is more pronounced.
5. Xylocaine is effective also as a topical anesthetic.
6. Xylocaine is effective without epinephrine, for long periods.
7. In dosage required clinically, side reactions with xylocaine are rarer than with procaine.

Even with the best anesthetic agent the clinical results in regional anesthesia depend in part on satisfactory premedication, the skill and accuracy of the anesthetist, cooperativeness and gentleness from the surgeon. Block anesthesia ought never to be done in a hurry, and we have therefore routinely performed them half an hour before scheduled operation. We use the extra time not only for carefully checking the field of analgesia and to repeat the injection if necessary, but even to give the patient a definite mental preparation, helping him not only to accept the coming procedure, but to enjoy this form of anesthesia.

In this presentation of our results of about one hundred cases of different regional anesthesia procedures, we have concentrated on the first fifty cases of caudal block anesthesia for anal and vaginal surgery, as this form of regional anesthesia gives fewer variations from other factors that can influence the results. Because of the extreme pain sensitivity in this surgical region, every partial analgesic failure is a complete clinical failure and in such way the potentialities of the anesthetic drug stand out alone.

Forty-four cases were satisfactory in every respect. Two others were satisfactory when lightly supplemented, the reasons being noted below Four failures are described below. Time of onset of anesthesia was one to five minutes, with all but a few being one to two minutes. Duration of action was one to five hours: mostly three to four hours.

The failures.

Black[8] has the opinion that 20% of all patients are unsuitable for caudal anesthesia because of their emotional status, infections in the region, or bone deformities. The latter — based upon his anatomical investigation — was an absolute hindrance in 15.3%. Hingson and Edwards have reported a failure of 8.8% and their figures are more in correspondence with the authors' experience, ie., 4 cases in fifty.

In our series, in only one case (No. 18) was it absolutely certain that the needle did not enter the caudal canal. The palpatory findings gave suspicion of a nonclosed sacrum, and the attempts to insert a needle supported the suspicion.

In No. 13, an extremely obese 52 year old male, it is dubious if the needle was in place.

In No. 21, palpation gave suspicion that the caudal hiatus was very small, and after a few attempts to introduce a needle a local haematoma became a hindrance to further attempts. We could not tell whether the needle was in the canal or not.

In No. 3, a 63 year old male, 25 cc. xylocaine produced blurring of pain after 7 minutes, but as the analgesia after 17 minutes still was incomplete, the operation was done under local infiltration, instead of new injection in the caudal canal.

Supplemented anesthesia was given in two cases. In one case (No. 23) pentothal was given to a very nervous 44 year old female in spite of complete block analgesia for haemorrhoidectomy. In No. 50 intermittent N_2O analgesia was given during vaginal hysterectomy, when the patient temporarily complained of "cramp in stomach."

Complications were seen in 8 cases.

TABLE I

	Hypertensive reactions	Hypotensive reactions		Headache
		mild	severe	
Before operation	1	-	-	1
During operation	-	5 + 1*	-	-
After operation	-	2	1*	1

*Xylocaine without epinephrine

The hypertensive reaction in a 60 year old male (No. 41) was no doubt an epinephrine reaction. The blood pressure rose abruptly from 120/65 to 180/90 accompanied by headache and

returned to normal after 10 minutes, at which time the headache also disappeared.

The severe hypotensive reaction was seen in a 59 year old male (No. 5) with decompensated circulation. During operation, the blood pressure fell from 125/100 to 85/60 and when he was moved over to bed postoperatively, a still greater fall occurred, which was relieved when he was placed in recumbent position. Checking of analgesia postoperatively showed only saddle area analgesia.

The milder hypotensive reactions are mainly the result of the surgical positioning of the patient and to carelessness while moving the patient postoperatively. But in two cases a rising analgesia level was partly responsible.

In the case with mild postoperative headache (No. 36) the headache began 4 hours after administration of the anesthetic agent. The headache was relieved completely by aspirin and did not recur.

It is impossible to find a direct connection between the observed complications and the anesthetic drug per se. Similar complications have long been noted with other block agents, usually with equal or greater frequency.

Discussion

Many of us are reluctant to employ block anesthesia because of numerous failures in the past. It matters not whether these failures are due to our lack of skill or to anatomical variations in the patient. Too often we feel we cannot afford to dissatisfy the patient with incomplete regional anesthesia, so he is given a general anesthetic, even though a *good* block would be adequate and safer in many situations. Two outstanding properties of xylocaine have led us to modify our own resistance to wider employment of regional anesthesia. These are its penetrating powers and its long duration of action. Because of xylocaine's penetrating power, absolute accuracy is not essential in placement of the needles (eg., in brachial plexus block), nor is it necessary to use large volumes to be assured of proper spread (eg. lumbar sympathetic and caudal blocks). This property also makes for more rapid onset of anesthesia — an important factor to a busy anesthesiologist or surgeon.

The long duration of analgesia, even without epinephrine, is a most valuable property. It even allows one to do two or three blocks at the same time, then have those patients operated on in sequence for 20 minutes each, and still have good analgesia in the last patient for an hour or more after operation. Prolonged analgesia is of great value to proctologists, who have become xylocaine's most enthusiastic supporters to date.

SUMMARY

The study confirms earlier reports that xylocaine is the most effective agent for regional anesthesia today. We believe that xylocaine *without* epinephrine is satisfactorily effective for most purposes and gives fewer complications than xylocaine with epinephrine.

Practical Laboratory Evaluation of Renal Function

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In order to understand renal function tests, to use them to the greatest advantage and to avoid errors in technique and in interpretation, it is essential that we know what the kidneys do and how they perform their various functions. It is also necessary to have available a series of tests that are sufficiently simple, accurate and practicable to be used in any adequately equipped hospital laboratory. In this paper brief attention will be devoted to some of the newer tests of renal function that are not yet practical for the ordinary hospital laboratory. These have furnished important information concerning renal function that can be used in interpreting the results of some of the older simpler tests which are thus given a new value in the diagnosis and management of diseases of the kidneys.

Briefly, each kidney consists of more than a million units, or nephrons. Each unit is complex and is composed of a glomerulus from which arises a tubule that is, in turn, divided into parts with different functions. The kidneys have an exceptionally rich blood supply, estimated by modern methods to be more than one liter per minute. Blood enters the capillaries of the glomeruli under a higher hydrostatic pressure than in any other system of capillaries in the body, and estimated to be about sixty percent of the pressure in the aorta. This pressure, minus the opposing osmotic pressure of the plasma proteins, constitutes the effective filtration pressure. Under this pressure a very dilute solution of all the crystalloids in the plasma in the same concentration in which they occur in that fluid, is filtered through the walls of the glomeruli which are impermeable to substances with large molecular weight, such as proteins. As this filtrate passes through the tubules it undergoes certain important changes. The proximal convoluted tubules reabsorb some of the crystalloids, such as sugar, and enough water to hold them in solution; Henle's loop reabsorbs water and concentrates the urine; while the distal convoluted tubules perform those functions that are concerned with maintaining the acid-base balance of the body. The kidneys are, therefore, not only organs of elimination but are also important factors in maintaining the homeostasis of the body as a whole.

The kidneys possess a large factor of safety or functional reserve. Approximately one-fourth of the total kidney substance is capable of performing all the work necessary for adequate functioning of the kidneys. Because of the large functional reserve, these organs can suffer marked damage without too greatly endangering the life of the patient. It is important to remember, however, that as soon as his functional reserve has been exceeded, renal insufficiency may develop with startling rapidity. For this reason it is important to have available tests that will indicate the degree and the rate of progress of pathological processes that may lead to death from renal failure. In the application of these tests, we do not attempt so much to determine the exact type of the pathologic process which is the cause of the insufficiency as to learn its effect upon the ability of the kidneys to perform their normal functions. Each of the different pathologic types of renal diseases — glomerulonephritis, pyelonephritis, hydronephrosis, etc. — if it runs its natural course, ends ultimately in renal insufficiency which has the same general characteristics, regardless of the exact type of underlying pathologic change. In the management of a patient with kidney disease, the determination of the degree and rate of progress of renal functional disturbance has, therefore, greater practical importance than merely giving a name to the particular type of pathologic process that is the cause of the renal failure.

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The newer, more complicated methods of studying the functional activities of the kidneys enable one to determine indirectly, but with a high degree of accuracy, such important factors as total blood flow through the kidneys per minute, the rate of glomerular filtration, the fraction of plasma water lost by filtration and the relative mass of functioning tubular tissue. These will be briefly described. Inulin is excreted by the glomeruli and is neither excreted nor absorbed by the tubules. Inulin clearance is, therefore, a measure of the rate of glomerular filtration. Diodrast and para-amino-hippuric acid (PAH) are excreted by both glomerular filtration and tubular excretion. When either of these substances is maintained at a constant low concentration in the blood during the period of the test it is completely removed from the plasma during its passage through the kidneys. This could not, of course, be accomplished by glomerular filtration alone. By comparing the total renal blood flow obtained by this means with the rate of glomerular filtration revealed by inulin clearance, it is possible to determine both the total amount of filtrate produced in a given time and the fraction of plasma water removed by this process. When either diodrast or para-aminohippuric acid is maintained at a high concentration, that is, at a level that exceeds the maximum capacity of the glomeruli and tubules to completely remove it from the blood, it is possible to determine the relative mass of functioning tublar tissue. These three tests — clearances of inulin and of diodrast or para-aminohippuric acid at high and low concentrations in the plasma — furnish information tion by which the relative degree to which the functions of the glomeruli and of the tubules are affected in a given patient.

Normally there is a structural and functional balance between a glomerulus and its tubule. The nephrons vary in size. A short tubule is supplied by a small glomerulus; a large glomerulus has a long tubule. Any pathologic process that upsets this balance, if sufficiently severe, will affect the product of renal activity and furnish a clue to the extent of renal disease. By applying measurements obtained from studies with inulin and PAH clearances to a variety of diseases affecting the kidneys, Earle has been able to establish a "number of fairly characteristic patterns of renal dysfunction, both organic and functional in origin." But since these tests are not available in most hospitals it is necessary for physicians to depend upon other tests in their study of diseases of the kidneys. In selecting simpler tests for this purpose an understanding of their basic principles, the ways by which they make their important revelations, the sources of error to be avoided and the meaning of the results obtained from them, are essential.

A great deal can be learned concerning the functional efficiency of the kidneys by a few very simple tests. In most hospitals every patient, upon admission, has a urinalysis as a routine procedure. This furnishes an excellent means of screening. Every patient whose urine contains albumin or has a specific gravity in the first morning specimen of less than 1.020 should have further examinations directed toward determining the functional efficiency of his kidneys. The concentrating power of the kidneys should first be tested. The greatest part of the work of the kidneys is performed in concentrating the urine and it is to be expected that here the first evidence of breakdown in functional efficiency will occur. The test is exceedingly simple and can be carried out with a minimum of inconvenience to the patient. The principle of the test is that after 14 to 16 hours of water deprivation, the kidneys, in their effort to conserve water for the body, concentrate the urine to the limit, or almost to the limit, of their capacity. The causes of the loss of power of concentration of the urine are (1) direct injury to the tubular epithelium, as by some poisons or acute infections; (2) reduction of the blood supply to the tubules due either to arteriolar disease, as in chronic hypertension, or to reduction of blood flow through the glomeruli in chronic glomerulonephritis; or (3) reduction of total blood flow through the kidneys, as in hydronephrosis and chronic pyelonephritis.

The application of this test is simple. The patient takes no water after 5 P.M. until the end of the test. Specimens are collected at 7, 8 and 10 A.M. the following morning. The quantity and specific gravity of each specimen is measured and recorded. Normally there is a variation in the specific gravity of urine secreted during the day and during the night between 1.003 and 1.025, or more. With the onset and progress of renal insufficiency the range of

specific gravities of day and night urine is narrowed. In the concentration test, a maximum specific gravity of 1.020 or less in the three specimens is indicative of some degree of renal insufficiency. The narrower the range between the minimum and maximum specific gravities, and the lower the maximum specific gravity among these specimens, the greater the degree of renal insufficiency. The maximum of insufficiency is reached when the specific gravities become "fixed" and fall within a very narrow range about 1.010.

As in all tests, there are sources of error, even in this simple one, that must be known and avoided. The patient may not co-operate fully and may take water clandestinely during the period of the test. This will invalidate any results obtained from it. Unreliable results may also be obtained in patients with edema, particularly if the edema is progressing or if the fluid is being absorbed and excreted. If the patient is markedly dehydrated the results may be misleading. Many urinometers are inaccurate and the use of such an instrument may lead to faulty results. Every laboratory should have at least one urinometer of approved accuracy, if for no purpose other than for comparison of new instruments purchased. Specific gravities should be taken on urine at room temperature. Freshly passed, still warm urines will give lower readings than those tested after cooling. The presence of albumin or sugar in urine also increases the specific gravity of the specimen, and, depending upon the quantity of albumin present, the reading may be inaccurate by 0.003 or more. Most of these sources of error can be easily avoided.

Another simple and convenient, but somewhat less safe test, determines the ability of the kidneys to excrete a highly dilute urine. It is probably incorrectly called a "dilution" test. It is hardly possible for kidneys to excrete a urine that is more dilute than the filtrate from the glomeruli. The principle of this test is that after the intake of a large excess of water, normal kidneys will excrete a large quantity of very dilute urine within a relatively short time. In the presence of renal insufficiency excretion of the excess of water takes place more slowly and the urine is less dilute than can be produced by normal kidneys. This deficiency of the kidneys appears somewhat later in the course of renal disease than inability to concentrate the urine.

In the performance of this test, the patient takes no breakfast and drinks 1200 cc. of water during a period of thirty minutes. Specimens of urine are collected at 1, 2, 3 and 4 hours after the water is taken and the amount and specific gravity of each specimen is measured and recorded. Normally almost the total quantity of water taken will be excreted during the first two hours and the urine will have a minimum specific gravity of 1.003 or less. In renal insufficiency a longer time is required for excretion and the minimum specific gravity among the four specimens will usually be greater than 1.003.

The sources of error in this test are much the same as those in the concentration test. It is especially likely to give false results in the presence of marked dehydration.

The phenolsulfonephthalein, or "PSP", test is useful and yields important information when it is properly applied and its limitations understood. This dye is eliminated by the kidneys by both glomerular filtration and by tubular excretion. Like the diodrast and para-aminohippuric acid tests, it furnishes some but less complete information concerning tubular function. The volume of urine is not a factor in calculating the amount of dye excreted, and the rate of its excretion diminishes with its concentration in the blood. The last mentioned fact explains the presence of the greater amount of dye in the first specimen as compared with later specimens derived from plasma in which the concentration of the dye is descreasing by progressive excretion.

The technique of the test is simple but must be performed with careful adherence to details. The patient is first given 400 cc. of water to drink in order to insure a free flow of urine. Twenty minutes later, 6 mg. of the dye are injected intravenously in order to avoid differences in rate of absorption. Fifteen minutes after the injection, the first sample of urine is collected. Other specimens are obtained one and two hours after the time of the injection. The percentage of dye excreted in each specimen is determined by use of a comparator or a colorimeter. Under the conditions of the test as thus performed, the first specimen should contain 25 percent of the dye injected. In all three speci-

mens up to 80 percent or more of the dye should be recovered. In renal insufficiency, the first specimen will contain less than 25 percent, and and all three specimens less than 60 percent of the dye injected. The smaller the percentage of dye eliminated, the greater the degree of renal insufficiency.

Since one of the functions of the kidneys is to eliminate the waste products of protein metabolism, renal insufficiency is accompanied by increase of nitrogenous waste products in the blood. The most important of these products are, non-protein nitrogen (NPN), urea nitrogen (BUN) and creatinine. Of this group, non-protein nitrogen and creatinine will usually give sufficient information to determine the degree of renal insufficiency. Elimination of these three substances by damaged kidneys does not parallel each other. Increase of urea nitrogen in the blood usually precedes the retention of non-protein nitrogen. For this reason, the BUN/NPN ratio may furnish useful information. The normal ratio averages about 40; a ratio up to 70 or 80 is sometimes found in severe cases of renal disease. Retention of creatinine occurs later in the course of renal insufficiency than retention of the other two nitrogenous waste products. When the creatinine of the blood is very high, that is, more than 5 mg. per 100 cc. of blood, the patient is usually in uremia or it is impending. Creatinine is excreted by glomerular filtration only in man. Creatinine clearance therefore has some resemblance to inulin clearance. Its limitations and lack of desirable accuracy are due chiefly to the fact that other substances in the blood give the same color reaction used to determine the concentration of creatinine in the colorimeter.

Urea clearance is frequently used to measure the functional capacity of the kidneys. Urea is removed from the plasma by glomerular filtration but probably not, in normal persons, by tubular excretion. It is, however, reabsorbed from the glomerular filtrate by the tubular epithelium. The amount which is reabsorbed by normal kidneys varies under different conditions and is probably dependent upon general body needs. This variability in the quantity of urea reabsorbed by the tubules constitutes one of the limitations of the test. The words "clear" and "clearance" are somewhat misleading. The results of this test are stated in the number of cc. of plasma "cleared" of urea per minute, which means the number of cc. of plasma needed to furnish the amount of urea excreted in the urine per minute. When the kidneys are not functioning competently, the urea level of the plasma will be raised and fewer cc. of plasma will be required to furnish the quantity of urea excreted in the urine per minute. Hence the lower the "clearance" the more severe the renal insufficiency.

For the urea clearance test to be of value the results must be corrected to a standard and finally stated in terms of the percent of normal. Several factors influence urea clearance and unless the results are correlated with some standard may have little significance. Among these factors are: individual variations, such as body surface; the rate of flow of urine per minute; and the level of urea in the plasma. In the application of the test, the patient completely empties his bladder; and exactly two hours (120 minutes) later the bladder is emptied again and the amount of urine measured accurately. The number of cc. of urine obtained divided by 120 gives the number of cc. of urine excreted per minute. A sample of blood is drawn one hour after the first specimen of urine is obtained. The results are calculated from the following formula:

$$\frac{\text{U.u. x U.f.}}{\text{P.u.}} = \text{C.u.} \qquad (1)$$

U.u. = Mg. of urea per 100 cc. of urine.
U.f. = Flow of urine in cc. per minute.
P.u. = Mg. of urea per 100 cc. of plasma.
C.u. = Cc. of plasma "cleared" of urea per minute; i.e., the number of cc. of plasma required to furnish the number of mg. of urea excreted in one minute.

It is evident from this formula that the bladder must be completely emptied and that all measurements must be accurate.

The results obtained from Formula (1) must be corrected to, or correlated with, some standard of measurement. The body surface furnishes the best criterion, just at it does in determining the basal metabolic rate. This correlation is accomplished by the following formula:

$$\frac{1.73 \text{ x C.u.}}{\text{B.s.}} = \text{P.c.} : \text{a.b.s.} \qquad (2)$$

1.73 = Average body surface in square meters. a.b.s.

B.s. = Body surface of patient calculated from his weight and height.

C.u. = Cc. of plasma cleared of urea per minute.

P.c. : a.b.s. = Cc. of plasma cleared of urea per minute, 4 corrected to the average body surface of 1.73 square meters.

Since urea clearance is influenced by the rate of urine flow, it is necessary to determine what percent the results obtained from Formula (2) are of the normal clearance for the given rate of urine flow corrected to the average body surface of 1.73 square meters.

$$\frac{\text{P.c. : a.b.s.}}{\text{N.u.c.}} = \%\ \text{N.u.c.}$$

N.u.c. = Normal urea clearance, corrected for body surface, for any given urine flow per minute. This figure can be obtained from a Table to be found in a laboratory manual.*

*For example, in Manual of Clinical Laboratory Methods by O. E. Hepler.

Results obtained from Formula (1) alone are not of much value, because they do not take into consideration the two most important factors that influence urea clearance; namely, body surface and rate of urine flow. When the urea clearance of a particular patient is corrected for his body surface and compared with the similarly corrected urea clearance at the urine flow per minute of the test in question, the results have real significance. When this falls below ninety percent it signifies renal insufficiency. The lower the percentage, the greater the degree of decrease of renal function.

SUMMARY

When the admission urinalysis of a patient shows the presence of albumin and casts and the first morning specimen has a specific gravity of 1.020 or less, the efficiency of his kidneys should be determined by one or more of several available tests. Some of the newer tests, such as the clearance of inulin and diodrast or para-aminohippuric acid, yield valuable results that make possible the differentiation of the degree of glomerular and tubular efficiency. But these tests are too complicated to be practicable for the usual hospital laboratory. The best practical tests for determining the efficiency of the kidneys are: (1) concentration test; (2) diuresis or "dilution" test; (3) phenolsulfonephthalein test: (4) blood levels of non-protein nitrogen, urea nitrogen and creatinine; and (5) urea clearance test corrected for body surface and urine flow per minute. Periodic repetition of these tests will furnish information concerning the progress of the disease.

Surgical Treatment of Gastric Ulcer in the Aged

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A review of the opinion on surgical therapy in gastric ulcer reveals that the age factor is usually omitted. Routine gastric resection for benign ulcer in patients over seventy, if such is the indicated diagnosis by all the available data, is certainly not advised. However, the imperative indications for gastric resection in gastric ulcer should apply to patients over seventy, provided some unrelated complication making the operative risk too hazardous is not present. These indications are: 1. inability to rule out malignancy; 2. continued severe hemorrhage; 3. intractable pain or obstruction failing to respond to medical therapy.

The operative risks are obviously greater in the average patient over seventy (11 per cent mortality in 63 gastric resections for gastric carcinoma in patients over sixty-five at the Mayo Clinic in 1939-40[1]), but for the same reasons these patients are less able to withstand the hazards of continued blood loss and nutritional depletion incurred by the prolonged conservative treatment of the most severe complications of gastric ulcer. Compromise with malignancy is impossible regardless of age. If a patient's life expectancy can be expected to be lengthened, or his remaining days be made more comfortable, the decision as to surgery can be made solely on his ability to qualify as a reasonable operative risk considering the urgency of the indication for surgery. An individual of seventy years had in 1931 an average life expectancy of nine years and one aged eighty-seven, an expectancy of 3.5 years[2].

While reviewing all the gastric resections in patients over seventy years of age done at Wayne County General Hospital in the period from July 1, 1943 to July 1, 1949, it was of interest to us to note that in nine cases of this group the pathologist's diagnosis was benign gastric ulcer. Pertinent facts concerning these patients are outlined in Table 1. The ages of these nine patients ranged from 70 to 87, averaging over 76 years. Although unrelated diseases of major degree were present in several cases, in all patients satisfactory preoperative preparation was achieved. The probability of malignancy was a major factor in the decision for surgery in eight cases, and in one case surgery was performed because of repeated massive hemorrhages from an ulcer expected to be benign. The single postoperative death, resulting in a surgical and hospital mortality of 11 per cent, was in the last patient of this series. A large, poorly sealed off perforation in a frequently bleeding lesion which appeared to be malignant dictated removal of the ulcer in this patient. An unusually high resection was performed, as the ulcer was high on the lesser curvature. Death was apparently caused by a massive cerebral hemorrhage on the third postoperative day. This patient presented early cardiac decompensation and a severe secondary anemia on admission but both were adequately controlled before operation. Autopsy was not obtained.

In all cases at least a 75 per cent resection, with removal of the ulcer and usually a Hoffmeister retrocolic short-loop anastomosis, was done. Antecolic anastomosis was employed in the patients thought by the operator to have a carcinoma. Fortunately, in no instance was the ulcer situated so high on the lesser curvature that a choice between a Madlener-Florcken resection or a total gastrectomy had to be made. Total gastrectomy in an aged patient for a lesion of questionable malignancy would seem to carry too high an incidence of operative mortality and postoperative complications, and the Madlener-Floreken procedure, transecting the stomach below a high lesser curvature ulcer, has afforded unsatisfactory long term results according to Lewisohn[3], although Colp and Druckerman[4]

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TABLE 1

Patient Number	Age	Preoperative Complications	Preop. Days in Hospital	Reason for Operation	Postoperative Complications	Postop. Days in Hosp.	Roentgenologist's Diagnosis	Gastroscopist's Diagnosis	Operator's Diagnosis	Pathologist's Diagnosis
1	70	Hypertension, Coronary disease	25	Malignancy?	Wound disruption	25	Carcinoma	Carcinoma	Carcinoma	Benign
2	72	Diabetes, Hypertension	6	Malignancy?	None	10	Carcinoma	Not done	Undetermined	Benign
3	77	Urethral Stricture, CNS lues	18	Malignancy?	Stomal obstruction	22	Carcinoma	Lesion not seen	Benign	Benign
4	79	Severe secondary anemia. Herpes zoster	45	Severe hemorrhages. Failure medical treatment, Malignancy?	None	13	Benign, possible carcinoma	Not done	Benign	Benign
5	87	Severe secondary anemia	49	Continued bleeding, Failure medical treatment, Malignancy?	None	13	Carcinoma	Unsuccessful	Undetermined	Benign
6	75	Severe secondary anemia	10	Continued severe bleeding	None	10	Benign	Not done	Benign	Benign
7	82	High grade Pyloric obstruction	21	Malignancy?	None	15	Carcinoma	Carcinoma	Benign	Benign
8	73	None	25	Malignancy?	Pneumonia	20	Carcinoma	Carcinoma	Undetermined	Benign
9	73	Severe secondary anemia, Cardiac decompensation	25	Malignancy?	Massive cerebral hemorrhage third day	Expired 5th day	Carcinoma	Not done	Undetermined	Benign

were more gratified with the results in their series. Modifications of the Billorth I procedure would appear to merit more frequent consideration in gastric ulcer; a gastroduodenal anastomosis being more physiologic, technically less time consuming, and requiring less intra-abdominal manipulation, as recently suggested by Clagett and Waugh[5] and Fallis and Barron[6].

Measures calculated to lower mortality in geriatric surgery have been comprehensively discussed by Carp[7]. Particular attention was given to restoration of normal nutrition and replacement of blood loss in these patients, bearing in mind the contraction in blood volume noted in many chronically ill patients by Clark et al[8]. A comparatively long period of preoperative preparation in the majority of the patients usually obviated the necessity of supplementary parenteral alimentation. Tube feedings of a high caloric, high protein, liquid mixture, one and one-half to two calories per cubic centimeter, were in some cases indispensable, when a severe degree of pyloric obstruction was initially present, or when the patient refused to consume all of the diet which had been prescribed for him. A rough estimate of the duration of preoperative preparation likely to be necessary can be obtained by allowing five to seven days intensive feeding for each ten per cent of weight loss, as suggested by Varco[9].

First day ambulation, early resumption of oral alimentation, more specific methods of control of electrolyte and fluid balance, and more efficient methods of prophylaxis and treatment of pulmonary complications and thromboembolism are advances in postoperative care which have contributed most greatly to lowering of the mortality in geriatric surgery. In only three of the nine patients was parenteral alimentation employed to a significant degree after the first

postoperative day. Aged patients do immeasurably better on oral alimentation, not only because of increased caloric intake, but also because of decreased periods of immobilization incidental to the giving of parenteral solutions. Although estimation of chloride excretion in the urine, employing the method of Fantus[10, 11], is usually sufficiently informative, we, like others[11, 12], have found that a false sense of security is engendered when observing an aged patient with salt depletion in this manner. A judicious evaluation of both plasma and urine chloride levels, and plasma CO_2, is necessary in the critically ill postoperative patient[11, 12].

SUMMARY

Some current surgical opinion regarding the advisability of gastric resection for benign gastric ulcer has been reviewed. A restricted selection of cases for gastric resection in patients over age seventy is necessary. Nevertheless, carcinoma and the more serious complications of benign gastric ulcer do not become less indicative of the need for surgical therapy because the patient is aged. Due to modern advances in anesthesia and pre and post-operative care, major gastric surgery in elderly patients can be contemplated without fear of an unreasonable mortality. While the risks of surgery will be higher than the mortality considered acceptable for gastric resection for benign lesions in younger age groups, these risks are far exceeded by the dangers of delay in the treatment of the serious complications of gastric ulcer.

A small series of gastric resections for benign ulcer in patients over seventy years of age has been presented.

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The Hearts of Athletes

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Edited by:
Max Samter, M.D.
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Dr. Max Samter, Assistant Professor of Medicine: The subject of Professor Cureton's presentation is a chapter of the extensive research — conducted over many years in his laboratories — on the recording and predicting of performance. It deals with "Appraisal and Guidance", as he termed it in his textbook — a standard work on the evaluation of physical fitness. It is applied here to a specific problem — the hearts of athletes*, but should contribute as well to our understanding of limitations and potential in non-athletic individuals, ourselves, and our patients.

Dr. T. K. Cureton: Some endurance athletes have large hearts compared to those in normal young men. When rated by the Ungerleider-Clark tables (based upon 72" frontal X-rays, the "full diastolic heart" at one second exposure), McKenley, for instance, shows an enlargement of + 17.0%, Phinney of + 13.7%, Rehberg of + 11.7%, but many others are within normal limits. The track men who compete in the long sprints (200, 400 m., 800 m.) and swimmers who compete in the 200 m. and 800 m. relay usually have larger than normal hearts with larger proportionate enlargement of the right transverse diameter. The transverse diameter as a whole averaged 138.0 mm. for three champion middle distance runners, 135.8 mm. for six distance runners compared to the average of 130 mm. for a control sample of forty normal young men. A correlation of 0.39 ± .102 was found between the transverse diameter and time of the all out treadmill run at 10 miles per hour, 8.6% grade in an unselected group. Hypertrophy was not present in many veteran athletes like McLane, Smith Verdeur, and Ris, all Olympic champions in swimming, but it was present in Norris (+18.9%), and sprinters Wolf (+ 18.2%) and Dudley (+ 12.3%), all Olympic swimmers on the 1948 United States team. Norris swam 1500 m. and due to an injured and deteriorated leg swam with unusual effort of the arms which undoubtedly produced intrathoracic pressure above average when stroking. If the right heart ejected its blood into the lungs against this tension, it might cause right side hypertrophy. Back strokers and breast strokers were not usually enlarged and this may reflect the more natural breathing in these events compared to longer periods of breath holding in the crawl sprints and middle distance (200, 400 m.) races. It is not believed that these enlargements are harmful and a year or two after competition such enlargements usually regress to normal according to Tanner's studies of Finnish runners.

Twenty-one 1948 Olympic swimmers averaged +1.31%, total transverse diameter 130.6 mm., left segment diameter 83.7 mm., right segment 18.4 mm. and ratio of heart volume in liters to kilograms of body weight 1/75.2 by Herxheimer's Index with his corrections. The averages are about the same for a larger group of normal young men; but champion jumpers and vaulters, hurdlers and sprinters, wrestlers and weight men are all larger in this given order than the swimmers and larger than the average of the control sample.

The right segment to left segment ratio of 18.4 83.7 mm. for the Olympic swimmers,

*The basic data of Dr Cureton's work are presented in detail in a book now being printed and scheduled for release in June, 1951, by the University of Illinois Press, The Physical Fitness of Champion Athletes.

47/87 mm. for twenty track and field champions and 43/88 mm. for forty normal young men show that the athletes are hypertrophied mainly in the right segment and this may be a reflection of the effort of the right ventricle ejecting the blood into the lungs at times when the chest is constricted, thus increasing the resistance to ejection and causing more effort on the part of the right ventricle. Long distance runners are more typically enlarged on the left side and their breathing is more relaxed and full than the sprinters. It has been shown, however, that hypertrophy takes place during induced anoxemia in the decompression chamber and there is comparable anoxemia in long sprints, especially in swimming 200 m. or running 400 m.

The ECG's of top athletes commonly show arrhythmias, slurring and other irregularities, probably without being of clinical significance in view of the functional efficiency of the men. Such irregularities appear to be associated with vagotonia. Tanner (in Finland) has called attention to extreme competitive pressure resulting in tendencies toward acidity, ulcers, spastic constipation, stomach gas and disturbances in the rhythm of the heart. If the training is entirely too severe the nervous regulation may be upset and there may be associated fatigue, mental depression, loss of appetite and loss of ambition to compete, usually accompanied by evidences of staleness, such as, unusually fast pulse rate, higher systolic and diastolic blood pressures and nervous tremor. Such nervous derangement is temporary and is relieved by resting from the severest levels of competition, a change in the pattern of the work, or recreational interludes, during which ECG irregularities return to normal in a few days. These symptoms do suggest that only individuals with strong physical constitution and stable temperament can endure the top levels of competition for any period of time without showing some of these symptoms of stress. Guida (400m.) and Mathis (100 m.) in track gave the two most irregular ECG's. Both were National champions.

Low P-waves, high T and R waves, and short P-QR intervals are associated with endurance by actual treadmill running tests. No P-QR intervals greater than .22 seconds were found in 76 champion athletes and all QRS intervals were within the range of .06 to .10 seconds. No ST depression displacements were found, but in 19 cases the downward sloping leg of the R-wave is normally of lower amplitude in ectomorphs and is normally larger in high powered mesomorphs and fleshy endo-mesomorphs but the R and T waves are relatively higher in highly trained athletes except in distance runners on restricted diets. Such reduction of 1-4 mm. may be noticed after long periods of sweating on hot days following time trials. The R_V* wave correlates 0.567 $\pm$ .082 in a curvilinear relationship with heart size. The T_V wave is correlated 0.453 with the somatotype standard scores and 0.368 with the area under the Brachial pulse wave. The Brachial pulse wave correlated 0.870 with the Grollman acetylene method stroke volume. The latter is also correlated 0.527 with the R_V amplitude. These relationships suggest that the R_V and T_V waves are functionally related to stroke volume and heart work capacity except when extreme fatigue, salt and mineral depletion, or extreme alkalosis lower these waves as is sometimes seen in endurance runners.

John Marshall is an example of an athlete with a remarkable ECG. Marshall established five world's records in the six months preceding his tests. His R_V wave was 37.5 mm. in amplitude and his T_V wave was 18.6 mm. Normal young men average 24.51 and 10.26 mm., respectively. These measurements go along with one of the best Brachial pulse waves, a quiet sitting stroke volume of 90.4 cc., sitting blood pressures of 134/55 and heart volume by the Keys and Friedell equation ($V = 0.63 \times Area^{1.45}$) was 884.4^3. His heart volume by Liljestrand's equation ($V = .38 \times$ Long Diameter X Short Diameter X Depth of the Frontal X-ray) was 780 cm^3. His heart is anatomically right side predominant with the ratio of Right Diameter/Left Diameter proportional to 1/1.589. The normal young men's average by our data is 1/220. Nylin quotes an average of 300 cc. of hearing volume per square

*Actually the highest of the precordial leads was taken as the measure but lead V was highest in all but a few instances when lead IV was highest.

meter of body surface area for adults. Marshall gave 400 cc./square meter.

A well trained athlete usually has a *lean strong heart* which gives a *full range stroke and slow beat.* Hence, the Brachial pulse wave has relatively large systolic amplitude, the stroke volume is correspondingly large and there is large output for the size of the heart. There are two ways of showing this type of fitness in the heart. The first is by measuring the stroke output carefully, using the average of the two highest Grollman determinations, then calculating the ratio of Stroke Output/Volume (by Keys and Friedell, et al, equation). The top athlete range from 1/7 to 1/8 — the average is 1/10.3. This is the same as Nylin's method except that the ratio is turned upside down to show the proportionate output per unit of volume. A small heart fit can show relatively large output per unit of size. The second method is our own proposal. Since the area of the Brachial Pulse Wave per sq. m. of Body Surface Area is practically proportional to stroke volume, it can be substituted for all practical purposes for the quiet sitting stroke volume. Then the ratio becomes *Area of Brachial Pulse Wave per unit of surface area/Volume of the Heart* (Keys and Friedell, et al, equation). This ratio has given results for the best athletes from .700 to 1.200; for normal young men an average of about .500; for girls and poorly conditioned men .400 down to .100. This if the most promising method for fairly quick work without actual Grollman stroke volume determinations.

Functional tests of cardiovascular efficiency during work are superior to passive tests for rating individuals. In the quiet rested state the *Brachial Pulse Wave/ Body Surface Area* is one of the better tests and is highly related to stroke volume; also the Barach Index (Pulse Rate Times the Sum of the Blood Pressures in the Standing Position) and the Cureton Test (.62 Schneider Index + .48 Diastolic Blood Pressure) are good tests for the normal range of subjects but they are not adequate to show the top levels of circulatory capacity. It should be noted that the Cureton test is based on standard scores (available in our textbook on "Physical Fitness Appraisal and Guidance"), and low diastolic pressure is at the good end of the standard score scale. Predictions of endurance treadmill running have been as high as .60-.70 for these tests. They are about equal in predictive values at seven miles per hour, 8.6% grade. Better results have been obtained for maximal circulation determinations made *during* the run. This always involves measuring the oxygen intake and oxygen debt capacity in a treadmill run or a step test. The circulatory capacity cannot be determined except by using a hard exercise. The test for older subjects (above 35 years) and women is usually given at five miles per hour, 8.6% grade. The test for normal young men is given at seven miles per hour, 8.6% grade. The test for top athletes is given at ten miles per hour, 8.6% grade and combines high oxygen intake capacity with a low rate of oxygen debt in an all-out run. The equation for predicting time of the treadmill run with the latter is. (standard scores)

.75 (0_2 Intake in Liters per Kg.) —.46 (Rate of 0_2 Debt in Liters/Min./Kg.) Gilbert Dodds, for instance, had .0561 liters of gross oxygen intake per kilo of body weight and a net oxygen debt of 8.94 liters per minute of the run, and delivered over 30 liters of blood flow per minute and a stroke volume of 167 cc. per stroke. Tests at low rates of walking (3.5 mi./hr.) and running (5 mi./hr.) are inadequate for testing top athletes. Endurance runners and swimmers had the highest cardiovascular tests and they probably have the best cardiovascular systems in the world.

The Progressive Pulse Ratio Test.—There is another fairly good method for those who are unable to use the treadmill and gas analysis methods. This is our own modification of the pulse ratio. If the subjects are able to exercise, there is no doubting the superiority of the *Progressive Pulse Ratio Test* (12, 18, 24, 30, 36 steps per min.). The sitting pulse rate is carefully determined. Then the subject steps for exactly one minute up and down on a 17 inch stool at the rate of 12 steps per minute. Beginning ten seconds afterward the heart rate is counted with a stethoscope for two minutes. This count is divided by the sitting pulse rate. After the pulse rate has leveled off, the next rate of stepping is used. Each succeeding rate is carried out with enough rest between trials to permit the pulse rate to come back to its lowest rate. These several pulse ratios are plotted against the rates of stepping on standardized graph paper. The good athlete usually has relatively low pulse ratios at all rates of stepping and the plotted points fall in a straight line. Poorly

conditioned subjects have a larger angle of inclination with the base axis and above 24 steps per minute the slope may "break" so that the line goes more steeply upward. A large number of these tests have been given at our laboratory and the relative rating of subjects is about the same as using the oxygen intake and debt methods. There is an excellent relationship between the ratings given by the Brachial pulse wave and the Progressive Pulse Ratio Test.

There are, of course, many individuals who are not able or disposed to take oxygen intake and debt tests during endurance work on the treadmill.

In summary: *What is a good cardiac response?* A good heart is one which will develop a large stroke volume for its size, or per kilo of body weight or per square in. of surface area; which shows no appreciable retardation or derangements in relative timing of the P-QR or QRS phases after all out running or stool stepping; and which gives a proportionate straight line pulse ratio response to progressive rates of stepping on a 17″ stool. A strong circulation is characterized by a strong Brachial pulse wave, high T_V and R_V deflections in the ECG, a large oxygen intake capacity and low oxygen debt on a 5 or 7 mile per hour treadmill run to near exhaustion. It is not always possible to make accurate ratings from tests given in the quiet state. Great confidence is attached to good endurance in a standard exercise at a fairly fast rate. No confident rating can be given to an athlete without a hard performance test being used and careful measurement of the oxygen debt, oxygen intake, respiratory quotient and speed of recovery of the pulse rate. A good heart is obviously one which will sustain a fast circulation rate and large oxygen intake and transport to the tissues needing the oxygen in a hard endurance exercise.

Dr. Robert W. Keeton: *Professor of Medicine*: I should like to quote and comment by sections on Dr. Cureton's summary of the characteristics of a good heart.

"A good heart is one which will develop a large stroke volume for its size."—This means that the right heart has a large input of blood and that the left heart has sufficient contractile energy to move it along with a minimal acceleration of heart rate. A slow pulse enables the coronary arteries to fill readily. Prolonged acceleration of the pulse (paroxysmal tachycardia) leads to cardiac failure.

"Which shown no appreciable retardation or derangements in relative timing of P-QS or QRS phases after all out running or stool stepping." Dr. Cureton regards that these changes which disappear after rest are to be attributed to vagotonic influences rather than pathological symptoms. Transitory changes of this nature in the hearts of patients are customarily attributed to cardiac anoxia by clinicians.

"Which gives a proportionate straight line pulse ratio response to progressive rates of stepping on a 17″ stool." This indicates that under increasing work loads the pulse as measured by this test does not accelerate unduly when it is compared to the resting pulse.

I should like to replace in the summary the word "Heart" with cardiovascular system" and restate it: "A good cardiovascular system is one that can return to the heart a large volume of blood, deliver it to the arteries under increasing stress without accelerating the pulse appreciably and without showing signs of cardiac anoxia." The problem which concerns physical education is the derivation of simple tests to measure cardiovascular efficiency. Dr. Cureton has found in these athletes the maximal cardiovascular performance to which other athletes may be compared.

CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

A Case of Spontaneous Evisceration Through An Umbilical Hernia

I. F. Stein, Jr., M.S., M.D. and Francis H. Straus, M.D.

A 54 year old white male, was admitted to the Cook County Hospital on May 6, 1950. He was semi-comatose and confused; therefore, only a brief history was obtained at this time. He had been hospitalized a year previously for cirrhosis of the liver at which time paracentesis was done on three occasions. He stated that the puncture sites did not heal, and that occasionally there was a gush of fluid from this area. Three days previously his abdomen felt as though something broke, and his clothes were soaked with fluid. He was unconcerned that anything serious had happened, and came to the hospital because his friends complained that he had a very foul odor.

Physical examination disclosed a thin male whose skin was cold, covered with perspiration and a deep ashen color. The chest was emphysematous. Examination of the abdomen revealed evisceration of three or four loops of small intestine some of which were infarcted and covered with a purulent exudate. (Figure 1)



Figure 1. Appearance of the patient on admission, three days after a spontaneous evisceration through an umbilical hernia.

The temperature was 97.0° F., the pulse 110, and the respirations 30. The blood pressure was 148/80. The hemoglobin was 70%. Urinalysis showed 4 plus sugar, 4 plus acetone and 2 plus albumen.

The patient was immediately given a blood transfusion and taken to the operating room after the administration of morphine sulphate gr. 1/6 and atropine gr. 1/120. His condition at

From: Department of Surgery, Cook County Hospital, Hektoen Institute for Medical Research, Departments of Surgery, Northwestern University Medical School, University of Illinois Medical School.

this time appeared pre-terminal and we therefore planned to use only local anesthesia. After the application of antiseptic solution to the dirt-encrusted skin and of sterile drapes, the eviscerated loops of intestine were gently examined in order to ascertain the underlying pathology. It immediately became apparent that some of the loops of intestine were adherent to a sac-like structure on the under surface of the skin. The skin edges were necrotic. This manipulation caused the patient no pain, thus only oxygen was given and *no anesthetic* of any kind was administered. The mass of eviscerated, infected, necrotic and infarcted small intestine was resected en bloc, (Figure 2) and an end-to-end anastomosis performed on proximal and distal healthy intestine. The hernial sac was removed

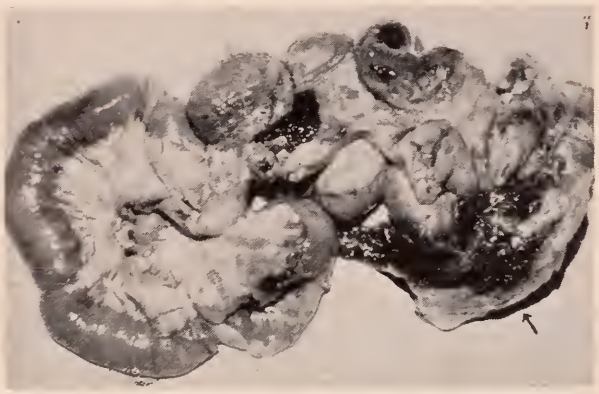


Figure 2. The resected specimen showing infected, necrotic and infarcted small intestine. Area of skin through which evisceration took place indicated by the arrow.

and the peritoneum and fascia were closed in a single layer with interrupted steel wire. The excess skin, including the necrotic edge, was removed and the skin closed with interrupted black silk. The patient was awake, although semi-stuporous, throughout the operation and experienced slight pain only at the end of the procedure when the excess skin was removed.

Following surgery the blood pressure was 160/76, the pulse 88, and the respirations 28. The skin was warm and dry. The patient had received 1000 cc. of blood before and during the operation and received another 500 cc in the next few hours. Continuous oxygen was administered and Levin suction started. He was given 40 units of regular insulin and started on 100,000 units of crystallin penicillin every three hours and 1 gram of streptomycin every six hours. Although no additional insulin was given, within seven hours the urine was negative for acetone and sugar and remained so.

The patient's general condition improved slowly during the immediate postoperative period. Testicular pressure was applied about four hours after surgery and the patient stated that this caused more pain than he had experienced at any time during the operation.

On the first postoperative day the condition of the patient was markedly improved. The rectal temperature was 100.0°F., the pulse 88 and the respirations 18. Although the patient had active bowel sounds and passed flatus, the abdomen was slightly distended and intravenous fluids and Levin suction were continued.

On the second postoperative day the patient removed his Levin tube, and got out of bed, walked to the wash room and had a loose bowel movement.

During the remainder of the postoperative period the course was uneventful other than for a transient diarrhea. Other supportive therapy included daily intravenous administration of 100 grams of aminoacids (in a 5% solution) which was given until adequate oral nutrition was assured. The patient also received daily Vitamin C and Vitamin B complex and additional blood transfusions on the third and fourth postoperative days. The skin sutures were removed on the 13th postoperative day at which time a slight wound infection was present. The patient was released from the hospital on the 17th postoperative day with minimal remaining wound infection.

The following additional history and data were obtained: the patient stated that three months following paracentesis he first noticed a mass the size of a hen's egg in the region of the umbilicus. This gradually increased to the size of a grapefruit. It was not tender at any time. The skin at the old paracentesis site had remained ulcerated, and when the patient had last seen this, about a month before evisceration, it was an inch in diameter, and was located on the inferior surface of the umbilical mass. He recently had been unable to see this area due to abdominal distention. After operation, on examination of the abdomen, it was noted that the umbilicus was no longer present.

The following pertinent data was obtained after surgery: Total protein— 6.4 gm./100 cc.; NPN — 36 mg./100 cc.; cephalin flocculation — 1 plus: Thymol turbidity — 2.6; Kahn — neg.

Discussion: Spontaneous evisceration through a hernia is extremely rare. Johnson in 1901 reported a case of a ruptured umbilical hernia and lists 17 cases of evisceration following an incarcerated hernia gathered from the previous century.[1] It is likely that this condition would have been more apt to occur before the advent of the modern surgical era.

The pathogenesis of the presented case is conjectural. Undoubtedly the patient had a chronic ulceration of the skin on the inferior aspect of an umbilical hernia. On several occasions the patient had experienced a spontaneous paracentesis when ascitis fluid gushed from this ulcerated area. The patient thought that the present episode was similar to those in the past and was unconcerned. It is interesting to note that although the eviscerated bowel was badly infected and necrotic in places, there was no peritonitis within the abdomen. This was probably due to the partial plugging of the neck of the sac with prolapsed bowel and to the constant outflow of ascitic fluid which prevented gross peritoneal contamination, and in part, explains the uneventful post operative course.

The liberal use of blood and antibiotics undoubtedly were major factors in both the survival of this patient, and the satisfactory wound healing.

Summary: A case of spontaneous evisceration through an umbilical hernia is presented. The condition had been present three days and the patient appeared moribund before surgery. Without anesthesia, the eviscerated bowel was resected, an anastomosis performed and the hernia repaired. The patient made an uneventful recovery.

1. Johnson, J. L.: Trans. South. Surg. 14:257, 1901.

PLANNED PARENTHOOD PROGRAM

The program of Planned Parenthood in the United States is not a "no babies" program, and not necessarily one for limitation of family size. The main idea is for each family to plan the time of arrival of its children in accordance with the mother's health and strength, the family's economic status, and the parents' wish to give to each of the children the love and care and training that will turn them all into useful and constructive citizens. The wanted child is the aim, and the avoidance of the unwanted child who is the source of so many unlovely features of our national and family life. Within this program the large family of children, for parents wanting them and able to care for them, is highly acceptable. The houseful of children in "Cheaper by the Dozen" fits well into this picture of wanted children. But we would question the rightness of the ailing mother bringing forth a succession of ailing infants to sap her inadequate strength and die in infancy from accumulated inadequacies and familial diseases. Nor could we say much for the family on public relief for fifteen or twenty years presenting the community with a new baby every year or two as an additional burden on public relief funds. These two conditions do recur, over and over. *Excerpt: The Planned Parenthood Program, D. F. Milam, M. D., New York, J. Florida M. A., Jan.* 1951.

CASE REPORTS



Acute Hemolytic Anemia Secondary to a High Titer of Cold Agglutinins in a Case of Primary Atypical Pneumonia

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The relationship of acute hemolytic anemia and primary atypical pneumonia has been receiving increasing attention in the literature. Because most of these cases have received sulfonamides, and since it is known that the sulfonamides alone may produce an acute hemolytic anemia, it has been difficult to establish another factor as the basis for this condition. However, cases of acute hemolytic anemia developing in patients with primary atypical pneumonia who have not received sulfonamides have been reported by Ginsberg,[1] Battaglia,[2] and Colmers and Snavely.[3]

The presence of high cold-agglutinin titers in association with primary atypical pneumonia has been reported by Peterson, Ham, and Finland,[4] Hortsman and Tatlock,[5] and Turner, et al,[6] and the hemolytic effect of these cold-agglutinins has been demonstrated by Stats and his associates. [7, 8, 9]

The mechanism of exposure and chilling of the body in the presence of high titers of cold-agglutinins with resulting hemolysis and anemia was first postulated by Daneshek[10] and Finland[11] and received its first clinical and experimental corroboration in the excellent work of Colmers and Snavely. [3]

The following case history, we believe, is another example of this mechanism since this patient received sulfonamides for only a twenty-four hour period and that was two weeks prior to the development of her acute hemolytic reaction.

CASE REPORT

A 40 year old white female was admitted to the hospital on Dec. 8, 1947, with the essential complaints of chills, fever, headache, and cough for the past four days.

From the Chicago Medical School and the Mount Sinai Hospital of Chicago.

History.—Past history revealed the usual childhood diseases; measles, mumps, chicken pox, and scarlet fever. A tonsillectomy was done at the age of 15 and an appendectomy at the age of 27. She was married and had three children. Digitalis therapy was given the patient during each of her three pregnancies. Further cardiac history, other than that she had fared well during her pregnancies, was not available.

The patient had been caring for her 16 old son who had been diagnosed as having "virus pneumonia" for about two weeks prior to her admission to the hospital. She was well until Dec. 5, 1947, when she felt lethargic during the afternoon and developed a sudden chill with a temperature of 100° F. After taking 10 grains of aspirin, she went to bed. That night she had several severe chills with a temperature of 102°F. and headaches. The following day she began to cough and experienced more chills with temperature elevation as on the night before. The cough was dry and unproductive. A physician called to the home gave her penicillin parenterally and put her on sulfonamides. The latter were discontinued within 24 hours because of nausea and after the patient had taken a total of 5 gms. of the drug. The following day, another dose of penicillin was given. The temperature, however, remained elevated. On Dec. 7, the temperature rose to 104°F. with no change in her symptoms. The next day she was admitted to the hospital.

Physical findings.—On admission, the pulse rate was 102, respirations 28, temperature 101° F., and the B. P. 110/55. Examination of the head and neck was essentially negative. There was impaired resonance and numerous moist rales in the R. L. L. posteriorly. The heart was slightly enlarged to the right and left. There were no murmurs. The abdomen, back, and extremities were essentially negative.

Laboratory findings.—X-ray of the chest, taken 24 hours after admission, revealed a pneumonic process in the lower half of the right lung field, enlargement of the right ventricle, and a hypoplastic aortic knob. On Dec. 9, the white count was 7,200 with 47% segmented forms, 29% stabs, 20% small lymphocytes, and 4% monocytes. The red count was 4,520,000 with 81% hemoglobin. The urine showed a faint trace of albumin. Kahn test was negative. A blood culture showed no growth after 5 days. A diagnosis of primary atypical pneumonia was made.

Clinical Course.—The patient continued to run a septic temperature ranging between 98° F. and 104.4° F. for the first 5 hospital days. On Dec. 10, she complained of "palpitation" of the heart and an electrocardiogram revealed the presence of a 2 to 1 auricular flutter with a ventricular rate of 130. Quinidine therapy was then started.

Over a period of 48 to 72 hours, between the 15th and the 18th of December, the nurses had noted that the patient had been voiding a dark amber colored urine. On the morning of Dec. 17, a marked pallor of the skin and mucous membranes was noted, and the patient complained of generalized weakness. A blood count taken that morning showed R. B. C. 2,230,000, W. B. C. 24,200 with 56% segmented forms, 5% stabs, 37% small lymphocytes, and 2% monocytes. That day a 500cc blood transfusion was given. Blood typing and cross agglutination tests prior to transfusion were made difficult because of the presence of cold agglutinins which were noted at room temperature. A blood count on Dec. 18 showed R. B. C. 2,330,000, Hb 36.6%, W. B. C. 40,300 with 49% segmented forms, 19% stabs, 6% metamyelocytes, 2% myelocytes, 14% small lymphocytes and 9% monocytes. There was marked hypochromia, anisocytosis, and poikilocytosis, moderate polychromatophilia, and four basophilic normoblasts per 100 W. B. C. Another 500 cc blood transfusion was given on that day and the laboratory again reported the presence of cold-agglutinins during the blood typing and cross-agglutination tests. On Dec. 21, the titre of cold-agglutinins was reported as being 1:5120. This was repeated two days later when the titre was reported as being 1:1280. The icterus index on Dec. 19 was ten units. A blood count on Dec. 25, showed R. B. C. 3,110,000 with Hb. 60.6%, W. B. C. 7,700, reticulocytes 17.8%, segmented forms 50%, stabs 7%, eosinophils 7%, small lymphocytes 30%, and monocytes 6%. A smear showed moderate anisocytosis, moderate hyprochromia, and slight polychromatophilia.

The patient began to feel better, more alert, and showed progressive improvement following the transfusions. The temperatures ranged be-

tween 98° and 100° F. at this time. An E. K. G. on Dec. 16 revealed a paroxysmal attack of auricular fibrillation in the first two limb leads and sinus rhythm with a rate of 76 in the remaining leads. She had an uneventful and afebrile convalescent course with a normal and regular pulse rate for the remaining hospital days. A blood count two days before discharge showed R. B. C. 3,430,000, Hb. 71.4%, W. B. C. 7,400, with segmented forms 67%, stabs 3%, eosinophils 8%, basophils 1%, small lymphocytes 17% and monocytes 4%.

The patient was discharged from the hospital on Dec. 31, 1947.

Treatment consisted of penicillin, streptomycin, oxygen, whole blood transfusions, iron, and other supportive measures.

SUMMARY

A case report of acute hemolytic anemia that developed secondary to an unusually high titre of cold-agglutinins in a patient with primary atypical pneumonia is presented. The literature is briefly reviewed and the current theory given for the cause of the hemolytic reaction. Repeated blood transfusions together with antibiotic therapy aided in the favorable outcome of this case. The total length of illness was three weeks.

CONCLUSION

Acute hemolytic reactions should be watched for in the presence of high titres of cold-agglutinins in acute febrile infectious diseases, especially in primary atypical pneumonia. The only therapy available to us in these acute hemolytic reactions is repeated blood transfusions. Since fragility of the erythrocytes increases with their age, the transfusions should be made with fresh blood. Chilled blood, of course, should be brought to room temperature.

Exposure and chilling in these patients must be avoided. This includes the alcohol sponge bath for skin care and high fever as pointed out by Colmers and Snavely[3], and probably also includes seldom thought of causes of body chilling such as iced drinks or low temperatures of oxygen tents. It is perhaps advisable in these cases of primary atypical pneumonia to make routine determinations of the cold-agglutinin titre in an attempt to prevent the development of this fairly serious complication.

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PATHOLOGY CONFERENCES

EDWIN F. HIRSCH, DEPARTMENT EDITOR



PRESENTATION OF TWO CASES

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CHICAGO
St. Luke's Hospital

BRONCHOGENIC CARCINOMA INVASION OF THE OESOPHAGUS

A white male, aged 54 years, entered St. Luke's Hospital on December 9, 1949 in the care of Doctor John T. Reynolds. He had difficulty in swallowing for about five weeks and a loss of 37 pounds in weight. He also had had a cough for about one week. A diagnosis of carcinoma of the oesophagus had been made in another hospital. His clinical history had no other significant items. The physical examination disclosed a large liver and varicose veins of both legs. The blood had 4,000,000 erythrocytes and 13,450 leucocytes per cu mm. By roentgen examination he had a tumor mass of the oesophagus and oesophagoscopy demonstrated an obstructing growth 34 cms. from the teeth which in biopsy tissues was a "small celled" carcinoma. Later the patient had marked dyspnoea and in roentgen films the mediastinal shadows were increased, thought probably due to an abscess. On the 14th day in the hospital an exploration of the chest with removal of the 8th right rib demonstrated indurated mediastinal tissues, but no abscess. The region was drained. Symptoms of respiratory distress and cardiac dysfunction increased and on the 18th day in the hospital, after supportive transfusions of blood, a left exploratory thoracotomy was performed and an inoperable carcinoma involving the oesophagus, aorta, and hilum of the left lung was found. The patient grew worse gradually and died on January 12, 1950, 34 days after admission.

The essential of the anatomic diagnosis of the necropsy limited to the trunk are:

Large ulcerated bronchogenic carcinoma invasion of the esophagus;

Extensive metastatic carcinoma of the peri-oesophageal, parabronchial, biliary, superior gastric and peri-abdominal lymph nodes;

Carcinoma invasion of the mediastinal tissues and adventitia of the thoracic aorta;

Carcinoma compression of the left main bronchus, the upper branch of the left pulmonary vein and of the thoracic duct;

Right empyema of the chest;

Large mediastinal abscess, etc.

The changes of significance were in the thorax. About two-thirds of the posterior portion of the right pleural space below was obliterated by

fibrous adhesions and above was 1 liter of a serofibrinous exudate. A pocket 12 by 8 by 10 cms. below near the midline, formed by the lung displaced upward and diaphragm displaced downward, contained more than 500 cc. of a purulent exudate. Another pocket 8 cms. in dia. more medially and at the diaphragm level contained a thick purulent exudate. The left 9th rib had been resected recently, the right 8th rib sometime before. Reflection of the viscera of the trunk disclosed a mass of nodular grey tissue in the posterior mediastinum that extended from a level 3 cms. below the sternoclavicular articulation down 18 cms., was 12 cms. wide and 5 cms. thick. The mediastinal abscess below involved the base of the right lung. The aorta, on the left side of the mediastinal mass was displaced backward. The tumor tissues extended 12 cms. below the diaphragm on each side, were 6 cms. wide and 2.5 cms. thick.

An ulcerated carcinoma involving the oesophagus began at a level 7 cms. (Figure 1) below the sternoclavicular articulation and extended 14 cms. in the length of the oesophagus to the diaphragm. The wall behind had a thickness of 4 cms., mainly soft grey tissues like brain cerebrum, the channel was markedly narrowed, and the lining surface was ulcerated. Tumor tissues around the oesophagus extended into the hilum of the left lung and into the posterior mediastinum (Figure 2). They spread also to the right side. A large amount of grey tumor tissue in front of the oesophagus had spread into the hilum of the left lung. The lining of the trachea and the main bronchi was hyperemic and the lumen contained a large amount of mucopurulent secretion. The lining of the left main bronchus, especially, was hyperemic and hemorrhagic and the channel was compressed by tumor tissues in the wall. The heart with 3 cms. of aorta and pulmonary artery weighed 500 grams. There were no noteworthy changes of the valve structures or myocardium. The right lung weighed 980 grams, the left 810 grams. Medially the right lung at its base had an abscess continuous with the mediastinal absces mentioned. The remaining tissues were markedly hyperemic and edematous. The right suprarenal gland weighed 15.7 grams and in the lower pole was a metastatic tumor nodule 3.5 cms. in diameter with a recent hemorrhage. The left suprarenal gland weighed 13.5 grams but had no metastatic



Figure 1. Photograph illustrating the bronchogenic carcinoma invasion of the oesophagus.



Figure 2. Photograph illustrating the carcinoma tissues about the left main bronchus and the aorta.

carcinoma. The biliary lymph nodes had nodules of metastatic carcinoma tissues. The liver weighed 2150 grams but had no carcinoma metastases. The lymph nodes below the diaphragm and along the lesser curvature of the stomach formed a mass 6 by 6 by 4 cms. and ranged to 2.5 cms. diameter. They were infiltrated by soft tumor tissues. The lining of the stomach, the bowel, the biliary tract, the gallbladder, and the pancreas had no noteworthy changes. Accordingly, the tumor tissues, excluding those in the periaortic and other lymph nodes, were in the thorax, largely the mediastinum but encroaching upon the hilum of the left lung. Microscopic examinations of the tumor tissues demonstrated that this carcinoma was not a typical stratified squamous cell carcinoma, such as arises commonly in the oesophagus, but rather a small celled tumor arranged in large and small masses with the structure of so-called oat cell or small cell bronchogenic carcinoma. These histological features accordingly permit the conclusion that the carcinoma was bronchogenic, not esophageal, in origin, that it developed in the wall of the left bronchus, grew largely into the mediastinum and involved the oesophagus. Clinically the symptoms of this patient were those caused by the growth of the carcinoma tissues into the oesophagus and resembled a primary carcinoma of the oesophagus.

COMMENT

Bronchogenic carcinomas are now one of the commonest forms of cancerous tumors. The usual symptoms of cough, hemoptysis, a chronic infection of the lung in a patient, alert the clinician to the possibility of a bronchogenic carcinoma. But in some patients the symptoms of the primary focus do not appear or are minor, and the manifestations of the disease are those associated with metastases into structures such as the bones, the brain, the pleura, the liver, the peripheral or deep seated lymph nodes, and by extension into regional structures. as in this patient, such as the oesophagus, or compression of the large pulmonary vessels, or superior vena cava. No other primary carcinoma has the potentials of producing such a wide range of clinical manifestations. The bronchogenic origin of the carcinoma of this patient was established only by histologic examination. In retrospect the soft grey tissues of the tumor, could have offered some clue. The small celled structure of the growth in histological preparations was characteristic of a bronchial tumor and unlike a primary squamous cell carcinoma of the oesophagus.

POLYCYSTIC KIDNEYS

A white male aged 62 years entered St. Luke's Hospital in the care of Doctor Harold Steinberg on January 9, 1950, after having collapsed while at work as an elevator operator. He had been short of breath for some time, was hypertensive for 10 years, and had been under treatment for a progressive failure due to polycystic disease of the kidneys. His blood pressure was 145/90 mms Hg., pulse 90 and respirations 28 per minute. The heart was enlarged, the rhythm was irregular, and the ankles were edematous. The non-protein nitrogen of the blood was 208 mgms, the creatinine 12.2 mgms., and the blood sugar 108 mgms per cent. The alkali reserve of the plasma was 19.2 volumes per cent, and the sedimentation rate of the blood was 55 mms. in one hour. The erythrocytes of the blood were 2,410,000 per cu. mm. and the hemoglobin was 6.8 gms. per cent. Vena section and supportive therapy had no benefit and the patient died on the second day in the hospital.

The essentials of the anatomic diagnosis of the necropsy of the trunk are:

Bilateral large congenitally cystic kidneys;
Multiple congenital cysts of the liver;
Marked edema and hyperemia of the lungs;
Anasarca;
Asites, etc.

Each markedly enlarged kidney was visible through the retroperitoneal tissues and the lower pole of the left extended to 3 cms. below the prominence of the sacrum. The large polycystic right kidney was 22 by 11 by 9 cms. and weighed 1000 gms., the similar left was 26 by 13.5 by 10 cms. and weighed 1330 gms. Both kidneys (Figure 3) consisted of cysts filled with a clear limpid yellow fluid that ranged to a maximum diameter of 6 cms. The pelves, and the major and minor calyces were widely dilated. The liver weighed 1820 gms. (Figure 4). Under the smooth capsule and in the deeper portions were multiple cysts ranging to 2.5 cms. dia. The cysts, although numerous, comprised only a small portion of the total tissues. The heart with 2 cms. each of pulmonary artery and aorta weighed 610 gms. The chambers were dilated and the myocardium was moderately hypertrophied.



Figure 3. Photograph of the capsular surface of the polycystic kidneys.



Figure 4. Photograph of the surfaces made by hemisecting the polycystic kidneys.

There were no fibrous scars or valvular lesions. Both lungs were markedly edematous and hyperemic. The right weighed 1000 gms., the left 1110 gms.

COMMENT

Most of the patients with polycytic disease of the kidneys seek medical care because of renal insufficinecy. Hematuria, malaise, vague abdominal discomfort or distention, and symptoms of hypertension or renal insufficiency occur. Occasionally infection complicates the basic disease. The disorder occurs about equally in both sexes, at all ages, and for many years heredity has been known to be important. Members of one and of several generations of a family have had the disease. Disturbances in the development of the kidneys are considered the cause, and commonly other malformations of the body are found. The liver frequently has similar cysts, and occasionally becomes a huge multicystic structure. Progressive renal failure results from the pressure atrophy of the functional parenchyma by the slow increase in the size of the cysts.

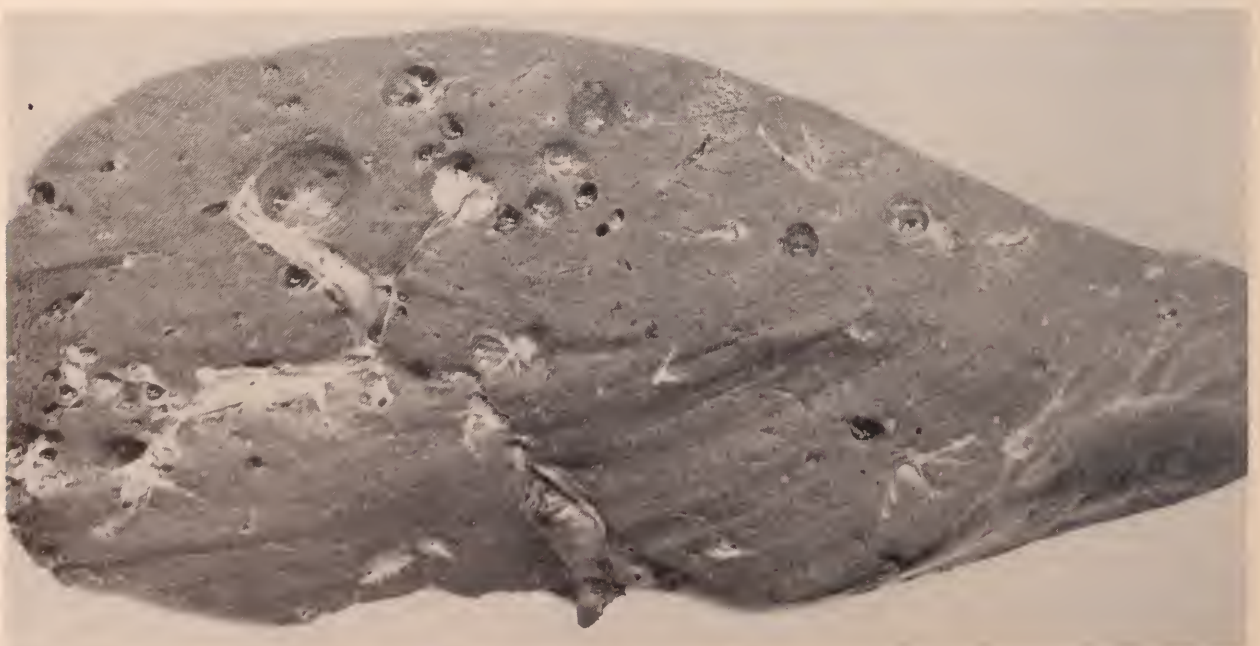


Figure 5. Photograph illustrating the cysts of the liver.

NEWS OF THE STATE



CHAMPAIGN

Society News.—At a meeting of the Champaign County Medical Society, January 11, in Champaign, Dr. Geza de Takats, Chicago, professor of surgery, University of Illinois College of Medicine, spoke on "Peripheral Vascular Disease."

Resolution Honors Physician.—A resolution honoring the late Dr. James S. Mason, Urbana, was adopted by the Rotary Club of Urbana recently. The physciian was a charter member of the group.

CHRISTIAN

Hospital Staff Election.— Dr. R. M. Seaton, Morrisonville, president of the St. Vincent's Hospital staff, succeeding Dr. L. C. Young, Taylorville. Other officers are Dr. O. H. Lowder, Stonington, vice president; and Dr. J. H. Scofield, Taylorville, secretary.

New Officers.—The Christian County Medical Society recently elected Dr. R. M. Seaton, Morrisonville, president; Dr. F. W. Siegert, Pana, vice president; Dr. W. S. Miller, Assumption, secretary-treasurer; Dr. G. W. Arends, Taylorville, assistant secretary-treasurer; and Drs. L. H. Miller, Pana; N. C. Huss, Assumption and J. H. Scofield, Taylorville, censors. Dr. W. A. Monaghan, Taylorville, was elected delegate to the Illinois State Medical Society, and Dr. Seaton, alternate.

COOK

Personal.—Dr. S. H. Armstrong, chairman of the department of medicine, Presbyterian Hospital, addressed the monthly meeting of the Medical Society of Milwaukee County, Milwaukee, recently on "ACTH."—Dr. Joseph Shanks was recently appointed to the consulting staff of Walther Memorial Hospital in ear, nose, throat and bronchoesophagology. —Dr. Alfred S. Strauss, senior attending surgeon at Michael Reese and Mount Sinai Hospitals, was recently named "Alumnus Summa Laude Dignatus." by the University of Washington.—Dr. Hans Popper, associate professor of pathology in Northwestern University's Medical School, has been appointed to the editorial board of "Gastroenterology," scientific publication.

He will aid in selection of articles appearing in the publication. Dr. Popper also is director of the pathological laboratories at Cook County Hospital in Chicago.—Dr. William B. Wartman, chairman of the department of pathology in Northwestern University's Medical School, has been elected a trustee on the American Board of Pathology.

As a member of the Board of Trustees, he also will serve as assistant secretary in the group which approves licenses for specialists in pathology.

Dr. Wartman, who holds the Morrison Professorship of Pathology at Northwestern, also is director of laboratories at Wesley and Passavant hospitals in Chicago.

Society News.—The Chicago Rheumatism Society was addressed January 31 on "Physicochemical Response of Articular Structures to ACTH and Cortisone." The speakers were Drs. Norman R. Joseph, C. I. Reed, Irving E. Steck and Max M. Montgomery. The discussion was carried on by Dr. Victor Gnillemin Jr.—Dr. Robert S. Berghoff, Chicago, will conduct a heart clinic April 25, and give a series of lectures on "Coronary Disease" before the London, Ontario Academy of Medicine.—Dr. Eugene F. Lutterbeck recently addressed the Illinois Radiologi-

cal Society, in Rockford, on "Contact Roentgen Radiation."—The Chicago Society of Physical Medicine and Rehabilitation sponsored a group of demonstrations at Cook County Hospital, February 28. The instructor was Dr. Disraeli Kobak. The program consisted of "Clinical Demonstration of Electrophoresis for Relief of Pain, Spasm and Vascular Disturbances" and "Endogenous Effect of Short Waves on the Hormone State."

Special Lectures.—Dr. Alvin F. Coburn, director of research, the Rheumatic Fever Research Institute, Northwestern University Medical School, delivered the twenty-seventh Lewis Linn McArthur Lecture of the Frank Billings Foundation of the Institute of Medicine. His subject was "The Host Problem in Rheumatic Fever." The tenth Edwin R. Kretschmer Memorial Lecture will be delivered at the Palmer House, April 19, by Dr. Sidney Farber, assistant professor of pathology, Harvard Medical School, subject to be announced.—"Psychiatry and Medicine" was the title of the lecture given by Dr. Karl Menninger, Topeka, Kansas, for the second annual Maurice Oppenheim Memorial Lectureship recently. The lecture was sponsored by the Alpha Rho Chapter, Phi Lamba Kappa, Chicago Medical School.—"Are You a Diabetic?" was the title of a lecture given by Dr. Howard Root, past president of the American Diabetes Association, February 20. The lecture was offered free as a public service of the Chicago Diabetes Association.

Memorial Service for Dr. Evans.—On February 4, commemorative services were held for Dr. John Evans, physician, railroad builder, first territorial governor of Colorado, and a founder of two universities, including Northwestern. President James Roscoe Miller, Northwestern, among other speakers, spoke on "Dr. John Evans, An Appreciation."

Physicians Honored.—Two Arlington Heights physicians, with a total of more than a century of practice behind them, (were) honored by the Arlington Heights Chamber of Commerce at its annual meeting February 20.

Special commemorative plaques presented to each man praised their long service to the community and expressed the appreciation of the town for their devotion to duty.

One of the plaques went to Dr. Edward A. Elfeld, Arlington Heights, graduated from the Medical College of Missouri in 1891 and settled in Arlnigton Heights in 1902 after practicing in German Valley and Chicago. The second went to Dr. Bruce T. Best, Arlington Heights, who has practiced there since he was graduated from Rush Medical College in 1904. A third plaque was presented to Mr. George Klehm, who has served 30 years on the Village Board and for long periods in other Village governmental units.

The address of the evening was delivered by Dr. Pliny R. Blodgett of Chicago Heights, councilor of the Chicago Medical Society, who paid warm tribute to Dr. Elfeld and Dr. Best and congratulated the Chamber for its action.

Award Goes to Clifford Grulee.—Dr. Clifford Groselle Grulee, Evanston, was honored at a medal award luncheon, January 31, at the Hotel Biltmore. Presentation of the annual Parents' Magazine Medal Award for Outstanding Service to Children was made to Dr. Grulee by George J. Hetch, publisher of the magazine and president of Parents' Institute, Inc. Guest speaker at the luncheon was Dr. Howard A. Rusk, professor and chairman of the department of physical medicine and rehabilitation, New York University-Bellevue Medical Center.

In making the award, Mr. Hetch cited Dr. Grulee's work as pioneer and leader for more than forty-five years in the field of pediatrics. He drew attention to the fact that Dr. Grulee was intrumental in founding the American Academy of Pediatrics and in supervising its various projects and studies. He also noted Dr. Grulee's activities as former editor of the Journal of Pediatrics and as author of three standard texts for pediatricians. One of these, Infant Feeding, completely revolutionized infant feeding concepts. Later, Dr. Grulee collaborated with Dr. Heyworth Sanford in a study of breast feeding versus bottle feeding and became a leading exponent of return to breast feeding for infants.

Mention was also made of Dr. Grulee's initiative in starting the first Infant Welfare Stations in Chicago with Dr. Henry Helmholtz. The movement has since grown into a widespread chain of Infant Welfare Stations throughout the area with Dr. Grulee as one of its directors.

Changes in Faculty at Chicago Medical School.—Dr. Harold S. Feinhandler has recently been promoted to instructor in the department of ophthalmology, Chicago Medical School. New appointments include:

Dr. Rudolph B. Edelstein, graduate of the University of Chicago and Rush Medical College, has been made instructor in the department of gynecology and obstetrics.

Dr. Colbert Smith Davis, who has served on hospital staffs in this country and in England, has been named assistant in the department of orthopedic surgery. Medical degree from Meharry Medical College, Nashville, Tenn.

Dr. Stanley E. Telser, M.D. from the University of Illinois, will be an associate in the department of medicine.

Dr. Jerome S. Beigler, M.D. University of Michigan, clinic staff member of Michael Reese Hospital and until recently Psychiatric Consultant for Illinois Division of Vocational Rehabilitation, will be associate in the department of neurology and psychiatry.

Dr. William O. Ackley, alumnus The Chicago Medical School, has been named assistant in department of anatomy. Dr. Ackley is on the staff of Swedish Covenant Hospital.

Dr. Samuel O. Zaidenberg, graduate Loyola Medical School, who has taught in Loyola University and Mount Sinai Hospital clinics, has been

appointed assistant in the department of gynecology and obstetrics.

Dr. Moshe Lev, who holds degrees from the Universities of Liege and Brussels in Belgium and the University of Lausanne in Switzerland, and is on the staff of Mount Sinai Hospital, has been made assistant in the department of pediatrics.

Dr. Maxwell M. Corbett, alumnus of The Chicago Medical School, has been named assistant in the department of orthopedic surgery. He did post graduate work at Cook County Graduate School and served on staffs of several Chicago hospitals, including Norwegian American, Walther Memorial and Alexian Brothers.

Dr. Kimbell Ross-Duggan II, M.D. Loyola University, who has been on the faculty of Loyola University Medical and University of Illinois, has been appointed assistant in neuro-surgery in the department of surgery.

Grant Subsidies on Bone Marrow.—The U. S. Air Force recently gave Northwestern University Medical School a grant of $22,275 to aid in a study of the effects of atomic radiation on bone marrow. The two-year research program will be directed by Dr. Howard L. Alt, associate professor of medicine at the medical school, with the assistance of Dr. John A. D. Cooper, assistant professor of chemistry (medical).

Scholarship on Nephritis.—The Chicago League for Nephritic Children announces the establishment of a Fellowship in the department of pediatric research, Michael Reese Institute for Medical Research, Michael Reese Hospital. Those interested should write to Dr. B. M. Kagan, Director, Department of Pediatric Research, Michael Reese Hospital, Chicago 16.

Scholarship in Occupational Therapy.—Scholarship awards for the training of students in occupational therapy have been established at the University of Illinois College of Medicine by the Illinois Association for the Crippled.

An initial contribution of $300 has been made to this fund. The scholarships are to be given to needy and deserving students who have reached their final year of study in the occupational therapy curriculum.

The Illinois Association for the Crippled, Inc., is the Easter Seal agency which maintains five treatment centers in downstate Illinois. The Association was established in 1937 for the purpose of carrying on different phases of direct service programs for crippled children.

Occupational Therapy Established in Private Department.—Occupational Therapy will operate as an independent department in the University of Illinois College of Medicine with respect to its teaching functions, according to an announcement by Dr. Stanley W. Olson, dean of the medical school. Miss Beatrice E. Wade, head of the newly-created department of occupational therapy, will continue to be reponsible under the guidance of an advisory committee for the administration of the curriculum. The head of each clinical service in the Research and Educational Hospitals which utilizes Occupational Therapy will continue to be responsible for the direction of the treatment provided for patients committed to his care.

The treatment units in occupational therapy will continue to serve as laboratories of learning for the occupational therapy student. The head of each clinical service will have joint responsibility with the head of the Department of Occupational Therapy for affording and developing opportunities for the effective use of occupational therapy in the interest of the educational program.

The occupational therapy curriculum was established at the University of Illinois College of Medicine in 1943, and was accredited by the Council on Medical Education and Hospitals in 1944. In this curriculum, students spend three years at the Urbana campus of the University, and 16 months at the University's Chicago Professional Colleges. Every graduate of this course has passed successfully the national examination—a record that is unique among the 26 occupational therapy schools in the country.

New Teaching Affiliation.—An affiliation has been consummated between Grant Hospital and the University of Illinois College of Medicine for the purpose of stimulating clinical teaching and organized research programs at both institutions.

Announcement of the affiliation has been made jointly by Hans S. Hansen, administrator of Grant, and Dr. A. C. Ivy. The agreement has been approved by the Board of Directors of the hospital, and by the Board of Trustees of the University.

The affiliation is expected to be mutually beneficial to both institutions. The affiliation will give Grant Hospital a university connection and will enable it to further develop its teaching and research programs. The University through its affiliation with a community hospital will be able to expand its teaching facilities and will have available a private institution for the use of its professional staff members.

Under terms of the affiliation, all members of the present staff at Grant Hospital will continue in their present capacities. New appointments to the professional staff will be correlated by the University and Grant Hospital.

The Board of Directors of Grant Hospital will retain all of its present authority over the administrative, physical and professional aspects of the hospital. The University will have representation on the Board.

Grant Hospital, a private institution located at 551 Grant Place, was founded in 1883 as the German Hospital of Chicago. The name was changed during World War I.

The hospital has 236 beds for adult patients plus 45 bassinets. Grant also operates an outpatient clinic which during 1949 had 17,720 patient visits. Of that number, 10,296 visits were handled at no cost to the patient.

Seminar on Nursing.—A five-month seminar on nursing services administration, designed to develop the best nursing administration curriculum, opened January 15 at the University of Chicago under a $100,000 grant to the university from the W. K. Kellogg Foundation. The seminar plans, developed November 3-4 at a conference in which delegates from 12 major universities and a number of government and public health agencies participated, were summarized by Herman Finer, director of the project and professor of political science at the University of Chicago. Two ranking nursing administrators or educators from each of the major universities, government health agencies and the armed forces nursing services will be invited to participate in the program of seminars and research. "At present, there is not only a lack of well-trained nursing administrators, but also a lack of well-trained educators of nursing administrators," Mr. Finer said in reviewing findings of the preliminary conference.

"There is a need to improve administration of nursing through all levels of professional and non-professional nursing services. The urgency is felt particularly with the rising standard of medical service the nation demands, the rapid application of new scientific discoveries, and the nation's mobilization for defense," he said. Emphasis was placed, at the conference, on the necessity of educating top level administrators as a first step in the improving of nursing administration generally. The problems to be solved include: the determination of the best allocation of time between classroom instruction and in-service training, the type of curriculum in nursing administration, the personnel required to teach nursing administration and to supervise in-service training, and the degree of democratic organization which can be obtained in nursing. Under the Kellogg Foundation grant, authorities in the administrative, medical and nursing fields will be invited to participate in seminar procedures. Funds to defray the tuition and living expenses of persons attending the seminar from participating universities and government health agencies are also provided under the grant. The Kellogg Foundation also made known that as part of these plans it would consider financially aiding in the further development of programs of study in each university, as each implemented the seminar findings in its own judgment and the use of its local resources.

DEWITT

Society Election.—Dr. E. M. Thompson was recently chosen president of the Dewitt County Medical Society; Dr. C. S. Bogardus, vice president; and Dr. H. L. Meltzer, secretary-treasurer.

DOUGLAS

New Officers.—Dr. Philip Deaver, Tuscola, was recently elected president of the Douglas County Medical Society, succeeding Dr. G. A. Jones, Arthur. Other officers include Dr. M. J. Reilly, Arthur, vice president; and Dr. E. S. Allen, Arcola, secretary.

FORD

Election of Officers.—Dr. Earl C. Bucher, Gibson City, was recently reelected president of the Ford County Medical Society; Dr. Martin D. Peterson and Dr. Gene M. Noble, both of Paxton, vice president and secretary-treasurer, respectively; and Dr. Clyde A. Rullison, Roberts, was chosen delegate to the Illinois State Medical Society, with Dr. Bucher as alternate.

FULTON

Society News.—Dr. Floyd Barringer, Springfield, addressed the Fulton County Medical Society, February 1, in Canton, on "The Neurosurgeon and the General Practitioner."

IROQUOIS

Staff Election.—Dr. R. A. Buckner, Gilman, was elected president of the Iroquois Hospital medical staff recently. Other officers chosen were Dr. E. L. Roberts, Watseka, vice president; and Dr. R. F. Donovan, Watseka, secretary-treasurer.

JEFFERSON-HAMILTON

New Officers.—The Jefferson-Hamilton County Medical Society held a joint meeting recently with the Woman's Auxiliary at which time the following officers were elected: Dr. Marshall Hall, president; Dr. Claire M. Dixon, vice president; and Dr. Harry G. Thompson, secretary-treasurer. All are of Mount Vernon. Dr. Isadore Zapolsky, Elgin, newly appointed medical superintendent of the Mount Vernon State Tuberculosis Sanitarium, was guest speaker.

KANE

Personal.—Dr. Herbert M. Stanton has been reappointed chief of staff at St. Charles Hospital.

KANKAKEE

Societies Choose New Officers.—Dr. O. A. Phipps, Manteno, was recently elected president of the Kankakee County Medical Society. Other officers of the county society are Dr. Ray Nourie, vice president; Dr. A. L. Nickerson, secretary-treasurer; Dr. Albert Nehf, censor, and Dr .Charles Allison, delegate to the Illinois State Medical Society. —Dr. H. P. Swartz is the new president of the Kankakee City Medical Society, with Dr. Reno Ahlvin, vice president. Dr. Nickerson is secretary-treasurer and Dr. R. E. Bedard, trustee.

KNOX

Society News.—The Knox County Medical Society was addressed January 18, in Galesburg, by Dr. Paul H. Holinger, Chicago, on "Bronchial Obstruction: Its Physiology and Pathology."—The society held its regular monthly meeting December 21 in Galesburg. Because of illness, the scheduled speaker was unable to appear. A brief business meeting was held and two physicians were elected to membership in the society: Dr. Frances B. Kapusinski, Galesburg; and Dr. Mavis H. Schraudenbach, Altona.

MC HENRY

Personal.—Dr. William Hepburn, Ringwood, was honored at a dinner recently in observance of his seventy-seventh birthday.

MACON

Health Commissioner Resigned.—Dr. P. A. Steele, city commissioner of public health and safety for the last eight years, announced that he would not seek reelection, according to the Decatur Review. He said he planned to return to the private practice of medicine.

Society News.—Dr. John B. O'Donoghue, clinical professor of surgery, Stritch School of Medicine of Loyola University, discussed "Acute Abdominal Emergencies" before the Macon County Medical Society, January 25, in Decatur.

PEORIA

Personal.—Dr. Robert M. Sutton, Peoria, has resigned as president of the Peoria Municipal Tuberculosis Sanitarium, newspapers reported recently. Other resignations include those of Dr. Dan Morse as medical director and superintendent; Dr. Peter B. Bianco, as assistant physician; and Dr. A. Baccalao, as resident physician.

ROCK ISLAND

Society News.—Dr. D. C. Campbell, Rochester, Minnesota, discussed "Recent Developments in Hematology" before the Rock Island County Medical Society, in Moline, February 13.

SALINE

Society Elects Officers.—At a recent meeting of the Saline County Medical Society, Dr. W. D. Tuttle, Harrisburg, was elected president; Dr. G. E. Kachele, Carrier Mills, vice president; and Dr. B. E. Montgomery, Harrisburg, secretary-treasurer.

SANGAMON

Society News.—"Another Aspect of Conservation in Pelvic Surgery" was the title of a talk by Dr. George H. Gardner, Chicago, before the Sangamon County Medical Society, February 1.

UNION

Personal.—Dr. R. C. Steck has taken over the activities as superintendent of the Anna State Hospital, succeeding Dr. C. D. Nobles who retired recently.

WHITE

Society Election.—Dr. J. Z. Stanley, Carmi, was elected president of the Dwight County Medical Society, at a meeting January 16, succeeding Dr. J. G. Harrell. Other officers are Dr. Clayton Curtis, Grayville, vice president; and Dr. Charles Rosenberg, Norris City, secretary-treasurer.

WILLIAMSON

Rotary Honors Physician.—The Rotary Club of Johnston City devoted its regular meeting, January 10, to honoring Dr. J. W. Clayton on his seventy-sixth birthday. Dr. Clayton began his practice in Johnston City in 1904 after graduating from St. Louis University School of Medicine.

WINNEBAGO

Society News.—Dr. K. A. Lofgren, Rochester, Minnesota, addressed the Winnebago County Medical Society, February 13, on "Treatment of Varicose Veins."

Personal.—Dr. Ward P. Burdick has been reappointed as county physician and superintendent of the Winnebago County Hospital.

HEALTH DEPARTMENT ACTIVITIES

Advisory Committee Appointments.—Governor Adlai E. Stevenson on January 24 announced appointment of two physicians to the Advisory Committee of the Division of Cancer Control in the department of public health. They are:

Dr. Robert E. Bowen, Springfield, for a term expiring September, 1952. He succeeds Dr. John A. Wolter, Chicago, who resigned. Dr. Bowen is the son of the late A. L. Bowen, former director of the Department of Public Welfare.

Dr. James P. Grier, Evanston, for a term expiring in July, 1953. He succeeds Dr. Everett P. Coleman, Canton, whose term expired.

Both appointments are subject to confirmation by the General Assembly.

Provisional Report on Communicable Diseases.—Decreases in the number of cases of most major communicable diseases highlighted the public health picture in Illinois last year according to Dr. Roland R. Cross, state director of Public Health.

Of the 29 major communicable diseases reported to the state department of public health, provisional statistics showed that 19 decreased from the 1949 total. The number of cases of three diseases was the same, while seven diseases were more prevalent.

Among diseases on the decline during 1950, scarlet fever dropped from 3,991 cases in 1949 to 2,112 last year; polio fell from 2,910 to 1,928; mumps cases reported were 1,300 less and cases of chickenpox declined by 3,665.

Typhoid fever fell to a new low of 69 cases as against 101 in 1949. Tuberculosis cases numbered 7,673 — less than had been reported in any year since the health department inaugurated its extensive program of free chest x-raying to detect this disease.

For the third consecutive year there were no reports of smallpox.

Measles showed the greatest increase last year, with 18,528 cases being reported as compared to 5,820 in 1949. This follows a rather well defined pattern of a high incidence of this disease every other year.

Amebiasis reached a new ten-year high of 639 cases. In 1949 there were 442 cases and the low figure of the last decade was 177 cases reported in 1944.

There were also slight increases in influenza, diphtheria, and meningitis.

GENERAL

Society News.—The Illinois Chapter of the American Academy of General Practice will hold its annual meeting at the Sheraton Hotel, Chicago, October 14-16.

Surgeons Create Illinois Chapter.—The Illinois Chapter of the American College of Surgeons was organized at a recent meeting in St. Louis. Officers include Dr. Mather Pfeiffenberger, Alton, president; Dr. Robert Patton, Springfield, vice president; and Dr. Kent Barber, Quincy, secretary-treasurer. Councilors named include Dr. Willis I. Lewis, Herrin, Dr. J. C. Thomas Rogers, Urbana, and Dr. Alfred B. Owen, Rockford.

Dr. Bailey Heads Mental Research.—Dr. Percival Bailey, prominent Chicago neurologist and a nationally recognized leader in his field, has been appointed chief of research in the state department of welfare's mental hospitals, a newly created position designed to expand and integrate research currently in progress. Dr. Bailey, professor of neurology and neurosurgery, University of Illinois Research and Educational Hospitals, who assumed his duties in the research position, January 1, will divide his time between the two posts.

Research Society News.—Dr. Anton J. Carlson, Professor Emeritus of Physiology of the University of Chicago, was re-elected president of the National Society for Medical Research at its annual meeting on February 11, 1951. Dr. Andrew C. Ivy, Vice-President and head of the Chicago Professional Colleges of the University of Illinois, was re-elected Secretary-Treasurer. Approval and authorization for the undertaking of two new projects was given at the meeting by the Board of Directors. One of these is the publication of a book summarizing the contributions of animals to medical progress and the welfare of human beings. The book will be illustrated with photographs. The other project is the production of a series of thirteen television films which will be based on real life visits to outstanding scientific institutions throughout the country.

DEATHS

Marie D. Bergen, Oak Park, who graduated at Hering Medical College, Chicago, in 1913, died January 16, aged 73.

Ashley M. Brand, Chicago, who graduated at Northwestern University Medical School in 1935, died December 29, aged 46.

Calvin Edgar Brown, Chicago, who graduated at Bennett College of Eclectic Medicine and Surgery in 1906, died in the Norwegian American Hospital November 21, aged 71.

Carl W. Carlson, Woodhull, who graduated at Rush Medical College in 1903, died January 6, aged 80. He had been practicing medicine in Woodhull since 1907.

George Asbury Conrey, Chicago, who graduated at Bennett Medical College in 1912, died November 29, aged 69.

Neveda C. Cooper, retired, Dupo, who graduated at Barnes Medical College, St. Louis, in 1902, died December 28, aged 84.

Petra Dahl, Chicago, who graduated at Chicago College of Medicine and Surgery in 1916, died January 24, aged 75.

John H. Edgcomb, Sr., retired, Ottawa, who graduated at the University of Illinois College of Medicine in 1906, died in an automobile accident, February 12, aged 66. He had been a member from LaSalle County of the House of Delegates of the Illinois State Medical Society for many years.

Leo I. Gradman, Chicago, who graduated at Chicago Medical School in 1918, died February 8, aged 61.

Theophil J. Holke, Freeport, retired, who graduated at Washington University School of Medicine, St. Louis, in 1899, died December 30, aged 74. He was a member of the Illinois State Medical Society "Fifty Year Club."

Lawrence Lee Iseman, Chicago, who graduated at Johns Hopkins University School of Medicine in 1906, died January 31, aged 71.

Walter W. McCabe, Chicago, who graduated at Northwestern University Medical School in 1919, died February 5, aged 66.

James Stephen Mason, Urbana, who graduated at Northwestern University Medical School in 1894, died January 8, aged 82. He was a member of the Illinois State Medical Society "Fifty Year Club"; in 1948 he was awarded the honor of outstanding medical practitioner for Champaign County Medical Society.

Herman Frank May, retired, Chicago, who graduated at University of Buffalo School of Medicine in 1909, died January 12, aged 68.

Charles Conrad Miller, Chicago, who graduated at Hospital College of Medicine, Louisville, Ky., in 1902, died November 25, aged 69, of coronary thrombosis.

Louis A. Minner, retired, Carbondale, who graduated at St. Louis College of Physicians and Surgeons in 1898 and Jefferson Medical College of Philadelphia in 1900, died January 18, aged 90.

Frederick W. Moeller, Chicago, who graduated at Northwestern University Medical School in 1906, died December 28, aged 73. He had practiced medicine in Chicago for forty years.

Clarence A. Neymann, Chicago, who graduated at Universität Heidelberg Medizinische Fakultät, Baden, Germany, in 1914, died January 12, in St. Petersburg, Florida, aged 63. He was chief of staff of Cook County Psychopathic Hospital and associate professor of psychiatry at Northwestern University Medical School.

James H. Pittman, Camp Point, who graduated at Rush Medical College in 1901, died January 29, aged 72. He had practiced medicine in Camp Point for 48 years.

Maurice L. Puffer, Downers Grove, formerly of Waynesville, who graduated at the Hahnemann Medi-

cal College and Hospital, Chicago, in 1907 and University of Illinois College of Medicine in 1909, died December 29, aged 78.

Edward H. Rategan, Chicago, who graduated at the University of Illinois College of Medicine in 1913, died January 19, aged 60. He was a captain in the medical service corps, World War I.

Arthur B. Storm, retired, Windsor, who graduated at Barnes Medical College, St. Louis, Mo., in 1898, died January 24, aged 79. He had practiced medicine in Windsor over 50 years.

Mark F. Todd, Springfield, who graduated at the University of Michigan Medical School, Ann Arbor, in 1942, died January 29, aged 35.

Joseph W. Walton, retired, Homer, who graduated at St. Louis University School of Medicine in 1906, died January 17, aged 82. He had practiced medicine 42 years, first in Clay City, then in Homer.

Clarence V. Ward, Sr., Peoria, who graduated at St. Louis University School of Medicine in 1919, died January 27, aged 60.

Hyman Yanofsky, Chicago, who graduated at Chicago Medical School in 1920, died November 30, aged 62.

"FOR THE COMMON GOOD"

Health Talk on TV.—Since the last issue of the Illinois Medical Journal, the following telecasts have been presented by the Educational Committee over WGN-TV, Channel 9; Monday evenings, at 8:30 p.m.

Arthur W. Fleming, January 29, Cerebral Palsy.

Claude N. Lambert and Miss Pearl Wittmack, R.N., February 5, Application of a Cast.

Mitchell A. Spellberg, February 12, How's Your Colon. **Clay-Adams Company** cooperated in providing equipment.

William P. Swisher, February 19, on Your Basal Metabolic Rate. **Clay-Adams Company and Sanborn Company** cooperated in providing equipment.

Your Doctor Speaks over WFJL, Thursday evenings, at 7:30, carried the following transcribed broadcasts under the auspices of the Educational Committee:

Gordon H. Rovelstadt, D.D.S., February 1, Your Child's Dental Care.

Beulah Cushman, February 8, "Cross Eyes."

Edward F. Rosenberg, February 15, Arthritis.

Hugh A. Flack, February 22, Coronary Thrombosis.

You and Your Baby over Station WAAF, Tuesday mornings, at 10:30 a.m. carried the following live broadcasts; this series is being repeated:

L. Martin Hardy, January 23, Questions Parents Ask.

Harry H. Boyle, January 30, The Baby at Six Months.

James A. Conner, February 6, Growth and Development.

Lawrence Breslow, February 13, Enjoy Your Baby.

Here is Your Doctor over Station WCFL, Saturday mornings at 11 a.m., presented the following physicans in transcribed broadcasts under the auspices of the Educational Committee:

Edmund A. Gorvett, January 27, The Irritable Colon.

Lester Nalefski, February 3, Living with the Atom Bomb.

Burton C. Kilbourne, February 10, Is It a Fracture or a Break, Doctor.

Edward S. Burge, Evanston, February 17, Prenatal Care.

Lectures Arranged Through the Educational Committee:

Jerome S. Beigler, February 5, Jewish People's Institute, on Your Body and You.

Albert C. Wendt Jr., West Side Center YWCA, February 5, on Posture and Poise.

Harry M. Hedge, Young Women's Christian Association, February 7, on Cosmetics and the Care of Your Skin.

Paul L. Wermer, Jewish People's Institute, February 12, on New Trends in Medicine.

William M. Lees, Young Women's Christian Association, February 21, on Modern Trends in Cancer Research.

Paul Ashley, Chicago Heights, Status of Women Study Group of American Association of University Women in Chicago Heights, February 21, on Cancer.

Jack Weinberg, Woman's Auxiliary to the Aux Plaines Branch of the Chicago Medical Society, February 23, in Oak Park, on How War Will Affect Your Child.

Edward F. Webb, Jewish People's Institute, February 26, on Care of the Eyes.

Adrian D. M. Kraus, Harvey Evening Women's Club and American Association of University Women (Child Study Groups), February 28, on Contagion and the New Drugs.

Harry H. Garner, Woodlawn Regional Branch, Chicago Public Library, February 28, on Growing Old Gracefully.

Robert M. Kark, Jewish People's Institute, March 5, on Nutrition in Relation to Health.

Morris T. Friedell, Jewish People's Institute, March 12, on What Is Preventive Medicine.

Mrs. John C. Scully, West Side Branch, Woman's Auxiliary to Chicago Medical Society, March 16, on The Myth of the Rolling Stone.

Joseph T. O'Neill, Ottawa, Utica PTA in Utica, April 2, We Build Together for Better Health For Our Children.

F. Garm Norbury, Jacksonville, April 2, in Olney on "Your Mental Health."

Robert R. Mustell, Burley PTA, April 13, on Parent Education.

Lawrence Breslow, Stephen F. Gale PTA, April 17, on Healthy Bodies Build Healthy Minds.

Lectures Arranged Through the Scientific Service Committee:

Louis R. Limarzi, Chicago, Champaign County Medical Society in Champaign, February 8, on Diagnosis and Treatment of the Anemias, illustrated.

Edwin N. Irons, Chicago, Kane County Medical Society in Elgin, February 14, on Newer Advances in Infectious Diseases, illustrated.

Philip Thorek, DuPage County Medical Society in Elmhurst, February 21, on Acute Surgical Abdomen.

Lawrence Breslow, McDonough County Medical Society in Macomb, February 23, on Infant Feeding with Emphasis on Infantile Colic.

Walter Reich, Chicago, Fulton County Medical Society in Canton, February 27, on Office Gynecology, illustrated.

Ormand C. Julian, Chicago, Bureau County Medical Society in Spring Valley, March 13, on Anticoagulant Therapy, illustrated.

Hans L. Popper, DuPage County Medical Society in Elmhurst, March 21, on Differential Diagnosis of Jaundice, illustrated.

John P. Coughlin, Chicago, Whiteside-Lee County Medical Societies in Sterling, April 12, on Neonatal Emergencies and Care of Emergencies.

J. Garrott Allen, Chicago, Springfield Medical Club, April 17, in Springfield, on Pathological Effects of Atomic Irradiation, illustrated.

Edward D. Allen, Chicago, DuPage County Medical Society, April 18, in Elmhurst, on Endometriosis, illustrated.

Conferences Arranged by the Postgraduate Education Committee:

In Champaign at the Elks Club, April 12, for the **Eighth Councilor District,** including the counties of Champaign, Clark, Coles, Crawford, Cumberland, Douglas, Edgar, Jasper, Lawrence, Richland and Vermilion. Dr. Harlan English, Danville, Councilor, presiding. The following will participate:

Edward N. Irons, instructor in medicine, University of Illinois College of Medicine, ACTH and Cortisone.

Peter A. Rosi, associate professor of surgery, Northwestern University Medical School, Gastric Surgical Resection versus Gastroenterostomy and Vagotomy, illustrated.

Leonard F. Jourdonais, Evanston, assistant professor of medicine, Northwestern University Medical School, Treatment of Medical Emergencies in Diabetes Mellitus.

George A. Hellmuth, assistant clinical professor of medicine, Stritch School of Medicine of Loyola University, Newer Advances in Coronary Occlusion, illustrated.

Gilbert H. Marquardt, assistant professor of medicine, Northwestern University Medical School, Geriatrics.

Julius B. Richmond, professor of pediatrics, University of Illinois College of Medicine, Abdominal Pain in Infancy and Childhood, illustrated.

In the evening, following dinner, speakers will be C. Paul White, Kewanee, President-Elect, Illinois State Medical Society, on Voluntary Prepaid Medical Insurance, and J. Garrott Allen, associate professor of surgery, University of Chicago School of Medicine, Medical Aspects of Atomic Disaster, illustrated.

In Moline at the Plantation Club, April 25, for the **Fourth Councilor District,** including the counties of Fulton, Hancock, Henderson, Henry, Knox, McDonough, Mercer, Peoria, Rock Island, Schuyler, Stark and Warren; Dr. N. C. Barwasser, Moline, presiding. The following will participate:

F. Garm Norbury, Jacksonville, Medical Director, The Norbury Sanatorium, Office Psychiatry.

Arthur H. Rosenblum, associate in pediatrics, Northwestern University Medical School, Allergy in Infants, illustrated.

George Cummins, clinical assistant in medicine, Northwestern University Medical School, Cardiovascular Aspects of Aging.

Harry A. Oberhelman, professor and chairman, department of surgery, Stritch School of Medicine of Loyola University, Surgical Treatment of Peptic Ulcer.

George Baumrucker, Cicero, clinical instructor in urology, University of Illinois College of Medicine, Treatment of the Neurogenic Bladder as Applies to General Practice.

Charles D. Krause, instructor in obstetrics and gynecology, University of Illinois College of Medicine, Treatment of Obstetrical Emergencies, illustrated.

Richard J. Bennett, associate in surgery, Northwestern University Medical School, The Significant Findings of 2,500 Physical Examinations in Men 65 Years of Age.

After dinner in the evening, Dr. Percy E. Hopkins, chairman, Committee on Medical Service and Public Relations, Illinois State Medical Society, will discuss "Voluntary Prepaid Medical Insurance", and Louis R. Limarzi, associate professor of medicine, University of Illinois College of Medicine, and Howard L. Alt, associate professor of medicine, Northwestern University Medical School, will hold a symposium on hematology.

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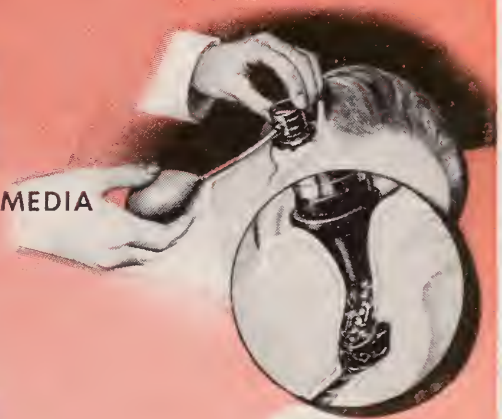
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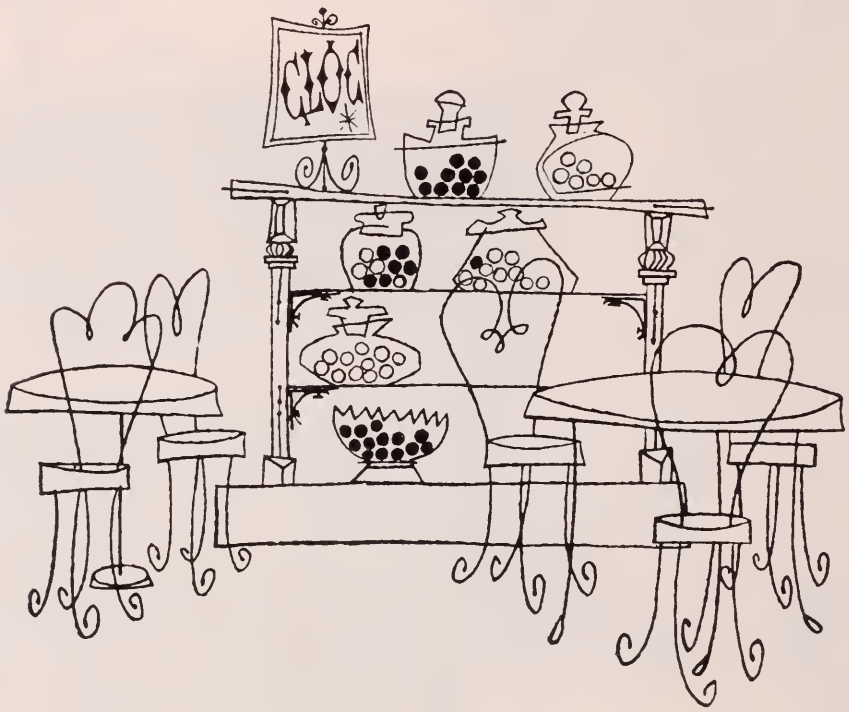
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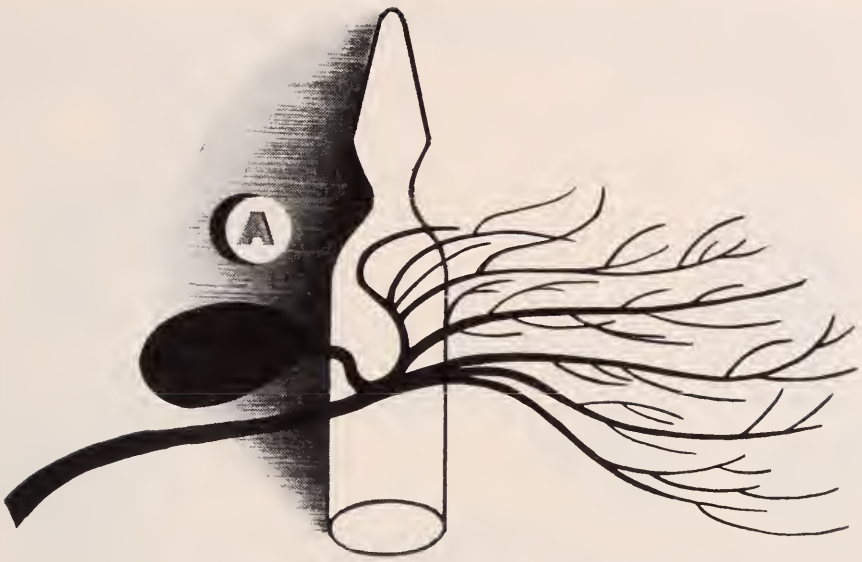
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The problem of encouraging children to eat an adequate breakfast finds easier solution when Ovaltine in hot milk is recommended as a breakfast beverage. Many children clamor for a hot drink at the morning meal and Hot Ovaltine is the right kind of drink to recommend.

A cup of Hot Ovaltine makes an excellent contribution of virtually all essential nutrients, adding substantially to the nutritional start for the day. It also serves in a gustatory capacity by enhancing the appeal of breakfast and making other foods more inviting.

The nutrient contribution made by a cup of Ovaltine is apparent from the table below. Note the wealth of essentials added to the nutritional intake by making the simple recommendation of adding a cup of Hot Ovaltine to the child's breakfast.



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PROTEIN	10.5 Gm.	IRON	4 mg.	NIACIN	2.3 mg.
FAT	10 5 Gm.	COPPER	0.2 mg.	VITAMIN C	10 mg.
CARBOHYDRATE	22 Gm.	VITAMIN A	1000 I.U.	VITAMIN D	140 I.U.
CALCIUM	370 mg.	VITAMIN B_1	0.39 mg.	CALORIES	225
PHOSPHORUS	315 mg.	RIBOFLAVIN	0.7 mg.		

*Based on average reported values for milk.



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MERCODOL provides prompt, selective relief that doesn't interfere with the cough reflex needed to keep throat passages and bronchioles clear.

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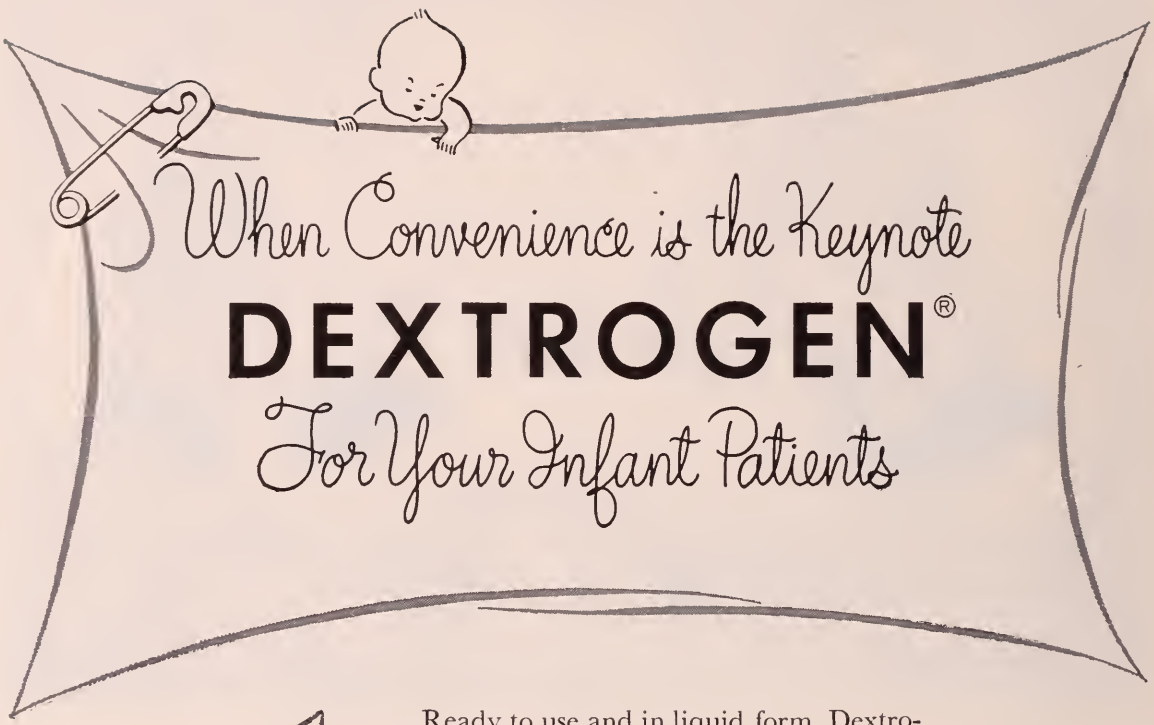
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[3]	Sodium Citrate	1.2 Gm.



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Ready to use and in liquid form, Dextrogen is a concentrated infant formula, made from whole milk modified with dextrins, maltose, and dextrose. In addition, it is fortified with iron to compensate for the deficiency of this mineral in milk. Diluted with 1½ parts of boiled water,* it yields a mixture containing proteins, fats and carbohydrates in proportions eminently suited to infant feeding. In this dilution it supplies 20 calories per ounce.



The higher protein content of normally diluted Dextrogen—2.2% instead of 1.5% as found in mother's milk—satisfies every known protein need of the rapidly growing infant. Its lower fat content makes for better tolerability and improved digestibility.

Dextrogen serves well whenever artificial feeding is indicated, and is particularly valuable when convenience in formula preparation is desirable.

*Applicable third week and thereafter; 1:3 for first week, 1:2 for second week.

NOTE HOW SIMPLE TO PREPARE

All the mother need do is pour the contents of the Dextrogen can into a properly cleaned quart milk bottle, and fill with previously boiled water. Makes 32 oz. of formula, ready to feed.*

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Providing generous amounts of complete protein essential to the anabolic processes of the human organism, meat is an outstanding protein food for maintaining not only nitrogen equilibrium but also positive nitrogen balance in the patient.

Only in the past two decades has been established the full significance of adequate protein nutrition for supporting the anabolic processes of the organism in physiologic stress.[1] The healing of all types of wounds, repair of regenerating parenchymal organs, detoxification, maintenance of normal fluid balance between the various compartments of the body, growth of replacement tissue in extensive burns, rapid manufacture of antibodies, normal phagocytic response, upkeep of the erythrocyte mass and plasma protein, and support of the enzyme systems are but some of the physiologic processes dependent upon the state of protein nutrition in the patient.

Due to the almost complete absorption of the digestion products of meat protein and its excellent indispensable amino acid balance, the protein of meat participates efficiently in the synthesis of new tissue protein. On the other hand, studies in liver regeneration after partial hepatectomy have shown that incomplete proteins of vegetable origin, fed alone, do not increase the protein of the impaired liver any better than a diet containing no protein.[2]

The high content of biologically complete protein, however, is not the only reason for including liberal amounts of meat in the dietaries of patients requiring a high protein intake. Meat is also an important rich source of iron and valuable amounts of essential vitamins—thiamine, riboflavin, and niacin, and the newly discovered vitamin B_{12} which, among its several functions, promotes the most efficient utilization of protein.

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(1) Ravdin, I. S., and Gimbel, N. S.: Protein Metabolism in Surgical Patients, J.A.M.A., 144:979 (Nov. 18) 1950.

(2) Vars, H. M., and Gurd, F. N.: Role of Dietary Protein in Experimental Liver Regeneration in Nitrogen Balance Study, Am. J. Physiol., 151:391 (Dec.) 1947.

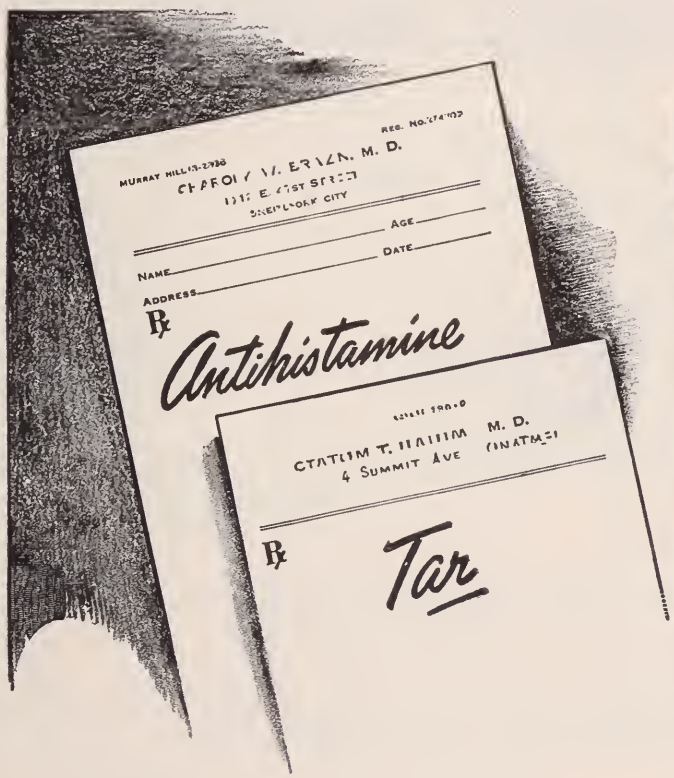
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Now, all in one preparation, HISTAR brings you a stable, balanced combination of a proven antihistaminic and tar extract for many allergic skin disorders.

HISTAR combines pyrilamine maleate 2% (formerly called pyranisamine maleate) with special process extract of coal tar 5% (Tarbonis brand) in a water-miscible, hydrophilic cream base, clean and non-staining in use.

Months of pharmaceutical research assure a completely stable emulsion. The antihistamine works to relieve the itching, swelling and burning that generally accompany many allergic dermatologic disorders, while the special process extract of tar treats the condition itself. It is especially indicated in neurodermatitis, atopic dermatitis, urticaria, the allergic rashes, etc.

No longer need you write two prescriptions. HISTAR's synergistic action provides the complete cycle of therapy in one easy to use clinically proven product. Your patient will appreciate its simplicity of application.

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PHYSICAL MEDICINE ABSTRACTS



AN EVALUATION OF VARIOUS METHODS OF HEATING VAGINAL AND ADJACENT TISSUES

R. N. Miller, M.D., Steven M. Horvath, Ph.D., C. Day, M.D., F. X. Sweeney, M.D., A. Rubin, M.D. H. Mellette, B.S., F. Smith and B. K. Hutt, Philadelphia. In ARCHIVES OF PHYSICAL MEDICINE, 31:11:721, November 1950.

Most gynecologists believe that heat is of value in the treatment of pelvic infection. The amount of heat necessary to produce required results does not appear to be clearly defined. Clinically it is considered that heat sufficient to induce only mild changes in the local temperature is effective. There are investigators, however, who insist that best results are obtained with very high local temperatures. Ignoring for the moment the relative virtues of these two opposing concepts, it is worthwhile to consider the question as to the absolute ability of the various modalities being employed to raise the temperature of the vagina and adjacent tissues. Values as high as, or even higher than, 114 F. have been claimed by some investigators. In many instances, however, the justification for such claims is not apparent, and they are not substantiated by the data or the methods of collection of the data. In view of the divergence of opinion, it was felt that a reevaluation of these modalities was necessary.

The Elliott procedure was the most effective of the procedures being evaluated in this study.

The elevations in temperature induced were of a moderate order of magnitude. The explanation for this small change probably is complex, but a major factor undoubtedly is the profuse blood supply of the pelvic organs, which rapidly dissipates the calories being introduced.

INHALATION THERAPY IN INDUSTRY

A. W. Borland, M.B., Ch.B., Medical Officer, Thames Board Mills Ltd. In THE BRITISH JOURNAL OF PHYSICAL MEDICINE, 13:10:217, October 1950.

Minor disabilities, due to affections of the nasopharnyx and respiratory system, causes a considerable amount of sickness absence in industry, not because of any industrial hazard but in the general daily exposure to infection.

Heating and ventilation make some contribution to a healthy working environment in the factory, but there are numerous occupations in which exposure to extremes of temperatures is unavoidable, this tending, in susceptible persons, to produce respiratory trouble.

It is clear that inhalation therapy is well suited to factory practice, especially if given in the form of an aerosol. Its chief aim is pre-

(*Continued on page* 64)



For your allergic patients . . . the antihistamine that gives

'Round-the-clock relief from 4 small doses

Decapryn's *long-lasting relief*,[1] combined with *low milligram dosage*,[2] makes it the ideal antihistamine for treating difficult allergies, or patients who have not responded to other drugs.

1. "Symptoms were relieved from 4 to 24 hours after the administration of a single dose of Decapryn—" . . . Sheldon, J.M. Et al: Univ. Mich. Hosp. Bull. 14:13-15 (1948)
2. "It was found that 12.5 mg. could be given during the day with comparatively few side reactions and yet maintain good clinical results—" . . . MacQuiddy, E.L.: Neb. State M.J. 34:123 (1949)

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DECAPRYN (DOXYLAMINE) SUCCINATE
Available on prescription only, as pleasant-tasting liquid, or tablets (12.5 mg., 25 mg.)

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vention in the first place, and so it can make a positive contribution to production.

Inhalation therapy enables some employees to continue at work, by treating subacute disabilities which would otherwise incapacitate them. In addition, there is ample opportunity of assessing the value of the many new substances now becoming available, which are designed for respiratory medication, and which may replace, in time, the era of the "cough bottle" and the poultice. It has, at least, the merit of tackling the problem in a rational way.

From the experience of the past two years, it has been found to be worthwhile to continue on the same lines; in due course it is hoped to evolve some kind of standard technic.

THE RISK OF POLIOMYELITIS AFTER TONSILLECTOMY

Gaylord W. Anderson, M.D., Dr. P. H., Genevieve Anderson, B.S., M.P.H., Audrey E. Skaar, B.S., and Franziska Sandler, M.S., Minneapolis, Minn. In THE ANNALS OF OTOLOGY, RHINOLOGY AND LARYNGOLOGY, 59:3:602, September 1950.

The existance of a relationship between poliomyelitis and tonsillectomy during the month preceding onset was first suggested by Sheppard in 1911 and clearly shown by Aycock and Luther in 1929. Since that time, numerous investigators have added to the growing literature on this topic, placing on record many instances of severe involvement that occurred within a few weeks after removal of tonsils. Undoubtedly many cases and even groups of cases remain unrecorded. Out of the many reports has come a growing realization that poliomyelitis occurring during the first month after tonsillectomy is more apt to be of the bulbar type than is infection occurring under other circumstances.

During the 1946 outbreak of poliomyelitis in Minnesota, 21 cases occurred within one month following tonsillectomy. Details of 19 of these are presented. Five (3 of the 19) were fatal.

Twelve of the 19 (63.2%) were bulbar as contrasted with only 4 bulbar out of 18 cases (22.2%) who had tonsils removed in the 2nd and 3rd months preceding onset.

There was a concentration of bulbar cases whose onset after operation was within the ap-

(*Continued on page* 66)



NUMOROIDAL SUPPOSITORIES

Soothing the Hemorrhoidal Area... Analgesic, vasoconstrictive medication in contact with the entire hemorrhoidal zone is provided in Numoroidal Suppositories. The special emulsifying base mixes with the secretions to assure coverage of the rectal area.

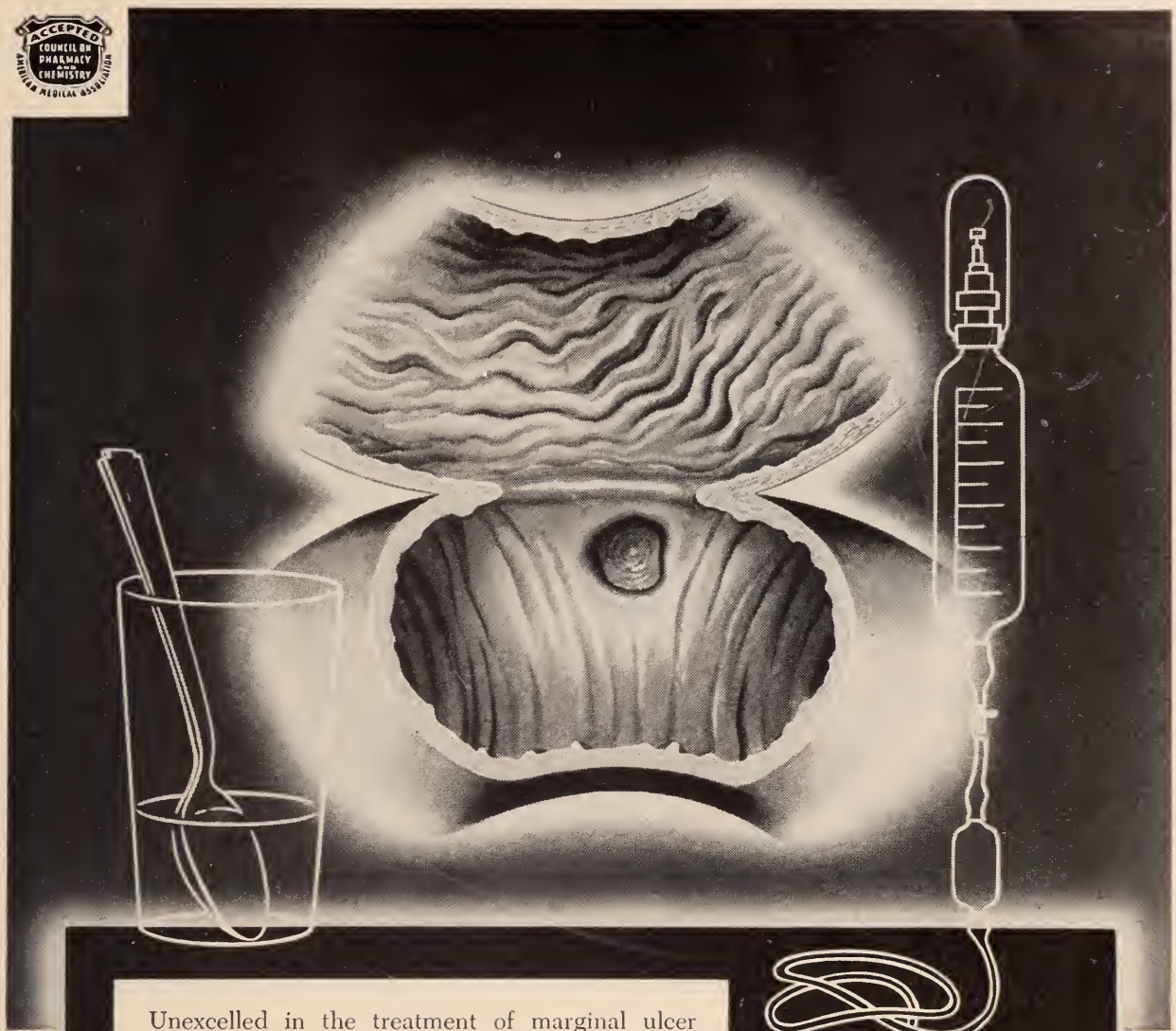
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Formula: ephedrine hydrochloride 0.22%; benzocaine 5.00%, in a special emulsifying base. Average weight of 1 suppository—1.8 Gm.

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Unexcelled in the treatment of marginal ulcer PHOSPHALJEL safely buffers gastric acidity—with no danger of alkalosis or "acid rebound." It lays a protective coating over the inflamed mucosa . . . provides quick relief from pain, facilitates rapid gains in strength and weight.

Excellent for prophylaxis against seasonal recurrences, protection against marginal ulcer following surgery, and in cases complicated by diarrhea and pancreatic deficiency.

PHOSPHALJEL is also admirably suited to intragastric drip therapy of refractory or bleeding cases.

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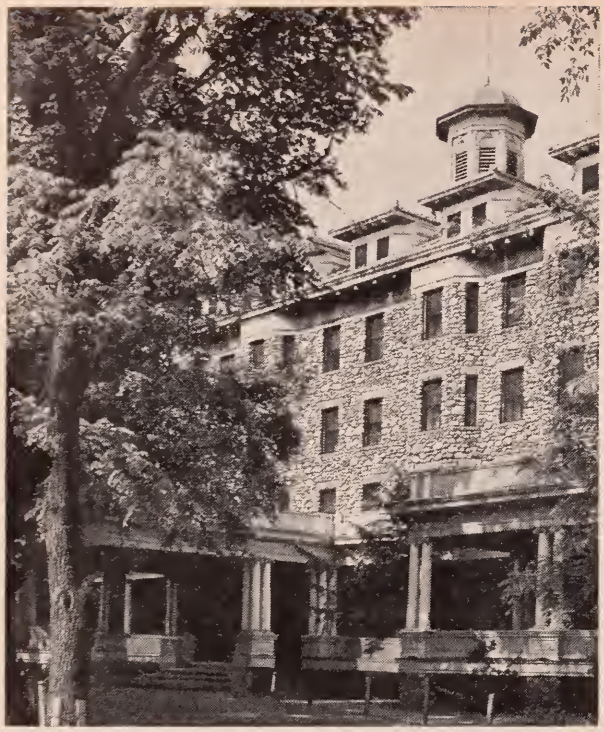
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PHOSPHALJEL®

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RENEWED STRENGTH
for your
Elderly Patients

The specialized care and handling required by so many of your elderly patients are available at Battle Creek Sanitarium. Here your geriatric patients can receive every attention that is needed to bolster their nutritional and physical health. When the diet calls for the inclusion of meat and fish, these foods are available, carefully planned by highly trained dietitians and deliciously prepared by competent chefs.

Complete medical facilities give assurance that existing abnormalities will be detected and properly cared for. The competent resident nursing staff understands the problems of aging. Physicians are invited to refer their geriatric patients here for the finest of care that can be given them. Special orders will of course be carried out meticulously.

Battle Creek Sanitarium has been offering its outstanding services continuously for 85 years; James T. Case, M.D., is president of the Board of Trustees.

Wire or call collect for complete information on availability of accommodations.

THE BATTLE CREEK SANITARIUM
BATTLE CREEK, MICHIGAN

Physical Medicine (Continued)

parent usual range of incubation periods.

The risk of developing poliomyelitis was at least three times as great among those undergoing tonsillectomy as among a comparable group not undergoing this operation and the risk of bulbar infection was 11 times as great.

REMOVAL OF SEBACEOUS CYSTS BY ELECTROSURGICAL MEANS

Sidney J. Robbins, M.D., New York and Nathan Pensky, M.D., Brooklyn. In ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY, 62:3:411, September 1950.

Summary: A simplified modification of the method of treating sebaceous cysts of the skin with the monopolar Ouidin diathermy current is described.

This method has the advantages that it is simple, the asmetic results are excellent, there are few recurrences, the pain and discomfort to the patient are minimal and no anesthesia is necessary.

A minimum of apparatus is required, and the entire operation can be performed in a few minutes as an office procedure.

PHYSICAL MEDICINE FOR THE HOME-BOUND ARTHRITIC

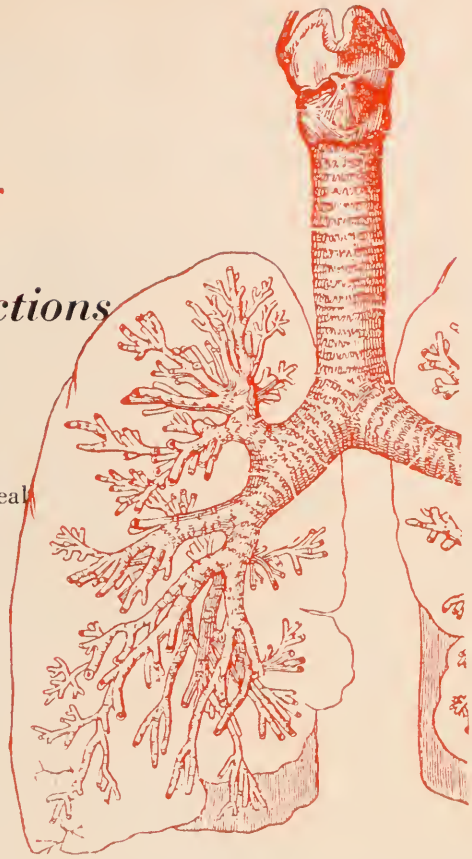
Donald J. Erickson, M.D., Rochester, Minn. In THE BRITISH JOURNAL OF PHYSICAL MEDICINE, 13:9:193, September 1950.

In the Section on Physical Medicine in the Mayo Clinic, patients with certain chronic rheumatic conditions are presented with a prescribed program of physical therapy for use in the home. The effectiveness of such a program was investigated in a survey made by Treusch and Krusen (1943) of 218 cases of arthritis in which a program of home physical therapy had been prescribed. It was found that 93 per cent of the patients had continued the prescribed treatment for varying lengths of time; that 65 per cent had continued it for three months or longer, and that 27 per cent had used it for one year or longer. In approximately 80 per cent of the cases, the patients thought that they had been benefited by the home treatment. The program is used in cases of rheumatoid arthritis and osteoarthritis.

(Continued on page 68)

"prompt" response
"excellent" response
"...extremely effective"

in acute upper respiratory infections



Promptness of response to therapy is essential in these infections to accelerate the patient's recovery and prevent the spreading of infection. Acute laryngotracheal bronchitis (H. influenzae)[1], acute follicular tonsillitis (Str. pyogenes)[2], and streptococcic pharyngitis[3,4] are among the conditions in which uniformly favorable responses described as "excellent" and "prompt" have been obtained with this new antibiotic agent. In pharyngitis particularly, it has been noted that Terramycin "... given orally appears to be extremely effective."[5]

CRYSTALLINE

Terramycin

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The growing clinical literature continues to stress:

1. *The broad-spectrum activity of Terramycin* against organisms of the bacterial and rickettsial as well as several protozoan groups.
2. *The promptness of response to Terramycin* in acute and chronic conditions affecting a wide range of systems, organs and tissues.

Supplied:

250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.

1. Herrell, W. E.; Heilman, F. R., and Wellman, W. E.: Ann. New York Acad. Sc. 53:448 (Sept. 15) 1950.
2. Herrell, W. E.; Heilman, F. R.; Wellman, W. E., and Bartholomew, L. A.: Proc. Staff Meet. Mayo Clin. 25:183 (Apr. 12) 1950.
3. Knight, V.: New York State M. J. 50:2173 (Sept. 15) 1950.
4. Dowling, H. F.; Lepper, M. H.; Caldwell, E. R., and Spies, H. W.: Ann. New York Acad. Sc. 53:433 (Sept. 15) 1950.
5. Schenck, H. P.: M. Clin. North America 34:1621 (Nov.) 1950.

Antibiotic Division **Pfizer** CHAS. PFIZER & CO., INC., *Brooklyn 6, N.Y.*

1941 A Decade of Progress in Antibiotic Therapy *1951*

Physical Medicine (Continued)

Patients with rheumatoid arthritis or osteoarthritis should follow a definite, prescribed program of physical treatment in their homes. The effective use of heat, massage, exercise and supportive aids is of value in such cases.

STUDIES IN CUTANEOUS ADRENERGIC BLOCKADE: AN APPLICATION OF ION TRANSFER

Arthur A. Rodriquez, M.D., Jules H. Last, M.D., Adolph Rostenberg Jr., M.D., and H. Worley Kendell, M.D., Chicago. In ARCHIVES OF PHYSICAL MEDICINE, 31:7:442, July 1950.

SY-28 exhibited very potent local adrenergic blocking activity lasting twenty-four hours, when administered by ion transfer. The duration of application necessary to obtain effective blocking ranged from four to eight minutes. The high incidence of sensitization (28 per cent in a series of 46 subjects) when the drug was administered by a new device, which provides for the incorfulness as a therapeutic agent by this technic. It was of interest that, while participating in the eczematous sensitization reaction, SY-28 was still capable of adrenergic blocking activity. Antihistaminic activity also was clearly exhibited.

Transient local adrenergic blocking activity was exhibited by Dibenamine Hydrochloride when administered by ion transfer. Twenty to thirty minutes of the ion transfer is required to produce 68 to 80 per cent blocking of epinephrine for a period of one-half to two hours after application of the drug. After two hours, however, blocking activity rapidly declined. Further studies on this phase of the problem are being made. No sensitization to Dibenamine was noted in 10 subjects tested.

FRACTURES OF THE SPINE

Carruth J. Wagner, M.D., San Francisco, Calif. In THE AMERICAN JOURNAL OF SURGERY, 80:4:424, October 1950.

Fractures of the spine make up an important part of any orthopedic service. We have the

(*Continued on page 70*)



Fresh Fuel...

UNTIL her physician can observe and treat her symptoms, many a woman, even today, faces the failing fires of the menopause with confusion . . .

Physicians who are no longer satisfied with the limited action of replacement therapy alone, are electing to use a MORE COMPREHENSIVE TREATMENT for menopausal disturbances. Specifically designed for this purpose, Tablet Phen-Orivan, Dorsey provides, in addition to estrogenic substances:

Thyroid to stimulate metabolism and promote a feeling of well being; phenobarbital and hyoscyamus to hasten relief by sedative and antispasmodic action.

EACH TABLET PHEN-ORIVAN, DORSEY CONTAINS:

Phenobarbital	¼ gr.
Thyroid	⅛ gr.
Ext. Hyoscyamus	⅛ gr.
Estrogenic substances from pregnant mares' urine, in their naturally occurring, water-soluble, conjugated form, expressed as sodium estrone sulfate	0.25 mg.

TABLET **PHEN-ORIVAN, Dorsey**

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appetite must be controlled

"The greatest problem in preventive medicine in the United States today is obesity."[1] And today it is well-known that *"The only way to counteract obesity . . . is by a restriction of food intake."*[2]

'Dexedrine' Sulfate controls appetite, making it easy for the patient to avoid overeating and thus to lose weight safely without the use (and risk) of such potentially dangerous drugs as thyroid. In weight reduction 'Dexedrine' *"is the drug of choice because of its effectiveness and the low incidence of undesirable side effects."*[1]
Smith, Kline & French Laboratories • Philadelphia

Dexedrine* Sulfate tablets • elixir

A most effective drug for control of appetite in weight reduction

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

1. Walker, W.J.: Obesity as a Problem in Preventive Medicine, U.S. Armed Forces M.J. 1:393, 1950.

2. John, H.J.: Dietary Invalidism, Ann. Int. Med. 32:595, 1950.

impression that our results are much improved with the Watson-Jones method than previously and are certain that the incidence of traumatic neuroses in the compensation cases has been decidedly lowered.

In using the Watson-Jones technic of closed reduction of lumodorsal fractures great care must be used to prevent hyperextension of the lumbosacral joint. Immobilization for four months with this joint in such a position will leave the patient with a disability that will exceed that of the fracture which is untreated. After removal of the plaster, flexion exercises should replace the hyperextension exercises the patient has been practicing during this immobilization.

THE PREVENTION OF ULTRAVIOLET ERYTHEMA OF TOPICAL APPLICATION OF PYRIBENZAMINE

Bruce B. Grynbaum, M.D., William Bierman, M.D., and Abner Kurtin, M.D., New York. In ARCHIVES OF PHYSICAL MEDICINE, 31:9: 587, September 1950.

Pyribenzamine is an effective agent in the prevention of the erythema produced by ultraviolet radiation. A ten per cent solution of Pyribenzamine affords complete protection against an exposure equal to 3 minimal erythemal doses and protects well, with only mild erythema formation, against 10 minimal erythemal doses.

We were unable to demonstrate any special chemical or biologic action to account for this protective influence. This effect seems to be produced by a purely physical barrier to ultraviolet radiation.

PHYSICAL MEDICINE AND REHABILITATION IN THE MANAGEMENT OF HEMIPLEGIA IN THE ADULT

M. K. Newman, M.D., and Lewis Cohen, M.D., Detroit, Mich. In THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, 49:8:915, August 1950.

The hemiplegic patient, the forgotten patient in medicine, is capable of unrealized restoration, physically, mentally, socially. Just as other chronic conditions (neoplastic, infectious, and psychiatric) have demonstrated their amenability to rational therapy, the chronic, semi-disabled,

(*Continued on page 72*)

PROMPT PAIN RELIEF...
RAPID, PROLONGED
ANTACID ACTION...
HIGH ACID-BUFFER
ACTION...
LOW ALUMINUM
CONTENT...
NO ACID REBOUND
...PLEASANT
TASTE... NO
NEED
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In peptic ulcer and hyperacidity, Alzinox gives prompt and prolonged symptomatic relief, without alkalosis or acid rebound — the pH goes no higher than pH 4.5 even when Alzinox is given in excess.

High acid-buffer capacity with minimum aluminum content is made possible by its unique combination with amino-acetic acid.

Alzinox is also available combined with phenobarbital and homatropine methyl bromide—for antacid-sedative-antispasmodic medication in one product.

ALZINOX TABLETS—0.5 Gm. (7.7 grs.) bottles of 100 and 500.
MAGMA ALZINOX—0.5 Gm. (7.7 grs.) per 5 cc. bottles of 8-oz.
ALZINOX with Phenobarbital (1/4 gr.) and Homatropine Methyl Bromide (1/100 gr.)—bottles of 100 and 500.
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Now...Vitamin A, C, D Drops



in aqueous solution for ***better absorption***

Aquasperse

Vitamin ACD Drops

Advantages:

Aqueous Solution—means faster and more efficient absorption of the fat-soluble vitamins A and D.

In conditions in which fat absorption is impaired, such as diarrheas, celiac disease, hepatic and biliary disturbances, the value of an aqueous solution is obvious.

Hypoallergenic—all the component vitamins of Aquasperse are synthetic. Consequently it may be used where patients cannot tolerate natural source vitamins.

Pleasant flavor . . . no objectionable odor—Aquasperse has an appealing, slightly citrus flavor and practically no odor.

EACH 0.6 CC. CONTAINS:

vitamin A	5000 U.S.P. Units
vitamin D_3	1000 U.S.P. Units
ascorbic acid	50 mg.

Note: The vitamin D_3 in Aquasperse is chemically identical and biologically equivalent to the vitamin D of cod liver oil.

Available—In bottles of 15 cc. and 50 cc. (with calibrated dropper)

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Complete Control of Epilepsy

Rather than simply reducing the number of seizures, the aim of antiepileptic therapy should be to maintain the patient seizure free and to help him live as normal a life as possible. This can be achieved by an integrated method of treatment.

I. OBJECTIVE — MAINTENANCE OF AN INTEGRATED PERSONALITY THROUGH:
   a. emphasis of patient's abilities not his disabilities
   b. participation in normal activities (not to the point of fatigue however)
   c. avoidance of patronization or overprotection
   d. removal of guilt feeling in patient due to ignorance or shame of disease

II. MAXIMUM SEIZURE CONTROL WITH A MINIMUM LOSS OF EFFICIENCY THROUGH:
   a. complete and correct diagnosis
   b. careful adjustment of medication to suit the patient's needs (depends on nature, frequency, severity of seizures)

III. SELECTION OF MEDICATION TO SUIT THE SEIZURES:

The drugs most commonly used at the present time are the barbiturates, the oxazolidinediones, and the hydantoins. ***Mesantoin*** *is a newer hydantoin and is most effective in controlling grand mal, psychomotor and Jacksonian seizures.*

DOSAGE REGULATION must be adjusted so as to obtain the smallest dose (usually 4-6 tablets) which will render the patient seizure free. Start therapy with ½ or 1 tablet daily. After a week on this dose a ½ or 1 tablet increment is added for one week. This is continued until the optimum maintenance dose is reached. If other medication is being taken unsuccessfully, **Mesantoin** can be added to the regimen in the same fashion, while the old drug is being reduced gradually.

SIDE EFFECTS—**Mesantoin** has been reported to produce side effects which can be manifested as a) rash b) drowsiness and c) blood dyscrasia. The skin and blood changes are primarily manifestations of individual sensitivity and indicate that the drug should either be reduced or discontinued.

PRECAUTIONS — as with most potent medication, certain precautions are necessary.

a. close check on the patient — repeated visits and blood counts — prescriptions should be non-renewable
b. no Mesantoin if original white blood count is below 4000
c. caution if rash or blood changes occur and if patient has history of previous skin rash or drug sensitivity
d. discontinue drug if bleeding of gums or vagina occurs — if patient develops sore throat or upper respiratory infections

Full data on request; write to:

Sandoz Pharmaceuticals

DIVISION OF SANDOZ CHEMICAL WORKS, INC.
68 CHARLTON STREET, NEW YORK 14, N. Y.

Physical Medicine (Continued)

hemiplegic patient now finds means for his rehabilitation through an integrated plan of treatment involving medical, surgical, physical, psychological and vocational services.

TREATMENT OF PERIPHERAL ARTERIOSCLEROSIS OBLITERANS: PHYSICAL AGENTS

Albert Fields, M. D., Los Angeles, Calif. In AMERICAN PRACTITIONER, 1:11:1156, November 1950.

In the attempt to relieve the symptoms of impaired peripheral circulation there is an increasing tendency towards indiscriminate use of physical therapy. Furthermore, the impressively glittering and "complicated" apparatus of physical therapy has provided a ready means of exploitation of the desperate afflicted. In this paper an attempt is made to present some of the indications for various physical modalities. Limitations, contraindications and dangers are pointed out.

Walking. Walking is usually contraindicated in the presence of severe pain during rest, discoloration of sudden onset, rapid increase in discoloration, and in the presence of gangrene or ulceration. According to Wright, the optimum rest position for the extremities is three to six inches below the heart. In absence of contraindications the patient should be encouraged to walk slowly within limits of olterance — until pain develops. Then after rest and calf massage, walking can be resumed. This can be repeated for a total of 30 minutes three times daily.

Postural Exercises (Buerger). It has not been proved that these exercises do increase the blood flow. However, if these exercises do not make too great demands on the individual, they are of value by reminding him that he has impaired circulation, and must take better care of his extremities. The Allen exercises are simpler but no more effective.

Sanders Bed. Best results were obtained with room temperature of 85 F. and elevation of the head of the bed so that the feet are just a few inches below the level of the heart. It was found advisable to have the feet become just balanced

(*Continued on page 74*)



COMPLETE SALICYLATE SATURATION

Without side effects

Relief of arthritic pain, the objective of therapy in joint involvements, is readily achieved with Salcedrox. The buffered sodium salicylate is more easily tolerated than salicylate alone, and is rendered systemically less toxic by the presence of calcium. The tendency to increased ascorbic acid loss is counteracted by the presence of calcium ascorbate in Salcedrox.

Salcedrox is highly useful whenever salicylates are indicated —in arthritis, rheumatoid involvements, neuromuscular affections, and rheumatic fever. It is available on prescription at all pharmacies. Literature supplied on request.

SE-MCO

Each Salcedrox tablet supplies:

Sodium salicylate	5 gr.
Aluminum hydroxide gel, dried	2 gr.
Calcium ascorbate (equivalent to 50 mg. of ascorbic acid)	1 gr.
Calcium carbonate	1 gr.

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

SALCEDROX
TABLETS

when elevated and cyanosed when in the dependent position.

Temperature of toes can be increased 1 to 4 C. The most striking effect was relief of pain in most patients even in presence of gangrene and ulceration. However, improved exercise tolerance and eradication of intermittent claudication should not be expected.

"Pavaex." Despite reported good results in occasional cases, "pavaex" is of questionable value and is contraindicated in the presence of gangrene, ulcers or infections.

Intermittent Venous Occlusion. Probably the popularity of this therapy is related to its availability, simplicity, and the fact that the patient can run the machine by himself at home. Its value has not been varified by controlled clinical experiments and in the future it will be little used.

Massage. Light massage (effleurage) for 15 minutes twice daily has a beneficial action by producing superficial capillary dilatation without increasing metabolism. Deeper massage increases venous return and lymph flow along with arterial flow but, if too vigorous, may increase metabolism and further injure already damaged tissues. It is contraindicated in the presence of infection, phlebitis, large ulcers or gangrene. Massage and gentle slow, passive stretching or traction also helps to relieve fibrositis and painful muscle spasms. As pain is relieved and muscle strength built up, one can increase active repetitive exercises against heavy resistance and walking within pain limits. Mechanical massagers and vibrators are mentioned only to be condemned.

Contrast Baths. Harpuder and others see no justification for the alternate use of hot and cold.

Whirpool Baths. It is doubtful that any form of bath can produce a prolonged improvement of circulation. However, as long as the water used is neither too hot nor too cold, the baths are not harmful, and many patients continue with this therapy because they think they are benefited by it.

Environmental Temperature. Obviously, the patient with impaired circulation should not fol-

(*Continued on page* 76)

VALOCTIN

℞ Valoctin tablets 5 grains, each containing 1 gr. Octin mucate and 4 grs. Bromural.
DOSE: 1 or 2 tablets at onset of distress. Another tablet after 4 hours if necessary.

SEDATIVE-ANTISPASMODIC

tension and migraine headaches - - spastic dysmenorrhea - - spasms of gastro-intestinal and genito-urinary tracts, with accompanying nervousness.

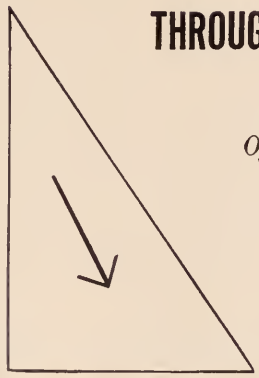
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Patient Carries on Normal Pursuits

THROUGH GRATIFYING RELIEF

of the symptoms of urinary tract infection



Throughout the course of treatment for urinary disorders many patients continue their usual activities, thanks to analgesia produced with orally administered Pyridium.

Pyridium can be safely administered concomitantly with antibiotics, the sulfonamides, and other specific therapy.

An analysis of symptomatic relief in 118 cases treated with Pyridium shows:*

Urinary frequency promptly relieved in 85% of cases.

Pain and burning decreased in 93% of cases.

*Kirwin, T. J., Lowsley, O. S., and Manning, J.: Effects of Pyridium in certain urogenital infections, *Am. J. Surg.* **62:** 330-335, December 1943.

The complete story of Pyridium and its clinical uses is available on request.



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Physical Medicine (Continued)

low any occupation involving exposure to cold. In inclement weather he should wear warm clothing or better yet, remain indoors.

Direct Heat. Fields believes that it is unsafe to apply heat in any form to extremities with impaired arterial circulation. This includes hot foot baths, hot compresses, hot water bags, infrared lamps, desert lamps, etc. Even moderate degrees of warmth (92 degrees) may increase local tissue metabolism more than it increases the circulation. Heat is beneficial only when circulation is increased more than the accompanying increased metabolism. With thermostatically controlled sheets and blankets, mild heat can be applied to the whole body for prolonged periods with confort and safety.

Reflex Heating. This method is much safer than direct heat application to the involved extremity. Increased blood flow and temperature rise indicates a high vasospastic element and/or extensive collateral circulation. Some restrict this therapy only to cases where such a response is obtained.

Diathermy. It is generally inadvisable to use diathermy on a limb with impaired circulation. It is safer to apply diathermy to the lumbar region, thus increasing blood to the lower extremities indirectly.

Summary. (1) Many physical agents now widely used in the treatment of peripheral arteriosclerosis obliterans are of little value in halting the progress of this condition.

(2) In the presence of impaired circulation, physical therapy must be used with caution and constant supervision.

(3) Attempting to relieve symptoms by vigorous use of physical agents probably will aggravate the condition.

(4) There are only a few worthwhile physical therapies — walknig within limits of tolerance, light massage, reflex heating, thermoregulated sheets and blankets, and whirpool baths.

(5) Carbon dioxide baths, iontophoresis and perhaps intermittent venous occlusion may be of limited value.

RECENT CONCEPTS OF RHEUMATOID ARTHRITIS

Oliver Abel, Jr., M. D., St. Louis. In THE JOURNAL OF THE MISSOURI STATE

(Continued on page 78)



Portrait of a former "coughing" patient

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Physical Medicine (Continued)

MEDICAL ASSOCIATION, 47:11:805, November 1950.

Rheumatoid arthritis is a general disease and affects the individual as a whole, not just the joints. Necessarily, treatment must be directed to the whole individual, both his physical and mental states. The physician should have a clear understanding with the patient in regard to his condition, the length of treatment and as near as possible his ultimate outlook. Measures should be taken so that changes in occupations can be made, change that are adaptable to the ability of the individual.

Proper rest to the individual as a whole and to the joints involved and attention to prevention of deformities and maintenance of function are of utmost importance. Definite rest periods and definite periods of exercising and activity should be prescribed, remembering a happy medium must be sought between no general activities and too much activity. Individual joints must be exercised first passively, as soon as the acute inflammation has subsided, and then actively for certain increasing periods each day. The amount of pain complained of and its duration and whether the pain with increased severity occurs should be the guide to the length of time of the exercises. Massage of muscles between joints associated with the exercises should be given. In regard to physical therapy, complicated and expensive apparatus is never necessary. Local heat in the form of light bulbs and pads will suffice. One of the best physical therapy measures at home is the hot tub soak. The individual, when able, should be placed in the tub and the time in the tub and the temperature increased as tolerated. While in the tub, the individual should be encouraged to move his joints. Deformities result when the parts are in flexion and this should be avoided. A proper bed is flat with a board under the mattress to prevent sagging so that the patient may rest in correct posture with joints extended. It is easier to prevent than to correct deformities. When flexion deformities have occurred, then the problem is chiefly orthopedic and it is not within the scope of this paper to go into orthopedic problems related to deformities.

(*Continued on page* 80)



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Many other dramatic cases reported.

1. Hoffman, Murray M., Ill. Dent. Jl., 19:439-445 (Oct., 1950)

2. McNealy, Raymond W., Ill. Med. Jl., 97:150 (Mar., 1950)

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Physical Medicine (Continued)

TREATMENT OF RHEUMATOID ARTHRITIS BY THE GENERAL PRACTITIONER

Herman H. Tillis, M. D., Newark, N. J. In THE JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY, 47:10:475, October 1950.

In evaluating any method for the treatment of arthritis, it is desirable to follow the criteria established by Steinbrocker et al. for the American Rheumatism Association. These criteria include functional, objective and laboratory changes.

Physical therapy is important and can be accomplished simply at home without expensive gadgets. Heat to an affected part will be helpful and can be maintained by a hot water bag, electric pad or a radiant lamp. Often, paraffin baths or painting with paraffin will help soothe a painful joint. This is comparatively inexpensive. Some member of the family can be taught massage, which should be applied lightly, after heat, as a preliminary to active motion. Massage often will prevent massive muscle atrophy.

Short wave diathermy should not be used during the acute phase of rheumatoid arthritis. This modality increases osteoporosis and does more damage than good. It has some place in the treatment of more advanced and quiescent phases of the disease. Ultraviolet light has questionable value. One practitioner told me, he gives it to all his patients, because it makes them look "healthy." Galvanic current and iontophoresis with various medicaments such as histamine, are soothing and helpful, as is sinusoidal stimulation of muscles. But these highly specialized and expensive technics are often unnecessary. Occupational therapy may be a great aid in awakening a patient's interest in exercising important groups of muscles.

Measures of Probable Value. —Fever therapy included by typhoid vaccine intravenously, foreign protein or fever machines are still being used to stimulate a severe bodily reaction. Fever therapy has its dangers. Thus, a word of caution.

Whatever we do to help the world, we have to start with health. There is not much that nations agree upon, but we can agree about health. Minnesota's Health, Dr. Knud Stowman, October, 1950.

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BOOK REVIEWS



VISUAL DEVELOPMENT—Volume I—by J. H. Prince, F.R.M.S., F.Z.S., F.B.O.A., F.S.M.C. Late Regional Association Lecturer in Comparative Ocular Anatomy and Ocular Evolution. With a foreword by Professor H. Hartridge, M.A., M.D., Sc.D., M.R.C.P., F.R.S., Professor of Physiology, University of London at St. Bartholomew's Medical College, Director Vision Research Unit, Medical Research Council. The William Wilkins Company, Baltimore. 418 Pages. 1949. Price $9.50.

This British author has produced an interesting book dealing with animal vision and comparative anatomy, a field which he states is almost unlimited and has room for many investigators.

The book was written after the completion of a fifty thousand mile expedition during which the researcher accumulated data by collecting and examining animals, observing them in natural habitats, and by obtaining information from naturalists, scientists and average citizens. Obviously, much of the investigative work was done in Australia—the pictures, the names of the animals and those persons acknowledged as contributors.

The long list of references includes many of recent publication, which should indicate that there is a healthy interest in this field of experimental optics and experimental naturalism.

Those in the limited field where this text will be most helpful will find it informative and well prepared.

L. P. A. S.

COMMUNICABLE DISEASES—Edited by Roscoe L. Pullen, A.B., M.D., F.A.C.P., Professor of Graduate Medicine, Director of the Division of Graduate Medicine, and Vice-Dean, School of Medicine, Tulane University of Louisiana; Senior Visiting Physician, Charity Hospital of Louisiana, New Orleans, 53 contributors, 1035 pages, 235 illustrations and 35 in color on 20 plates. $20.00. (6½" x 10½") Published June 1950. Washington Square, Lea and Febiger, Philadelphia 6, Pa.

This new book summarizes the extensive experience at Charity Hospital, New Orleans, with communicable diseases. It deals with the diagnosis and management of communicable diseases, approaching the problem in the same manner as the practitioner approaches a patient suspected of having a communicable disease. Theoretical considerations are included where necessary but the emphasis is on the handling of the individual case.

The organization is somewhat unusual in that diseases are classified according to their manifestations rather than their etiology; that is, diseases with primarily skin manifestations are grouped together, as are those affecting the respiratory system, etc. This approach from the standpoint of the clinician makes the book more useful to the practitioner.

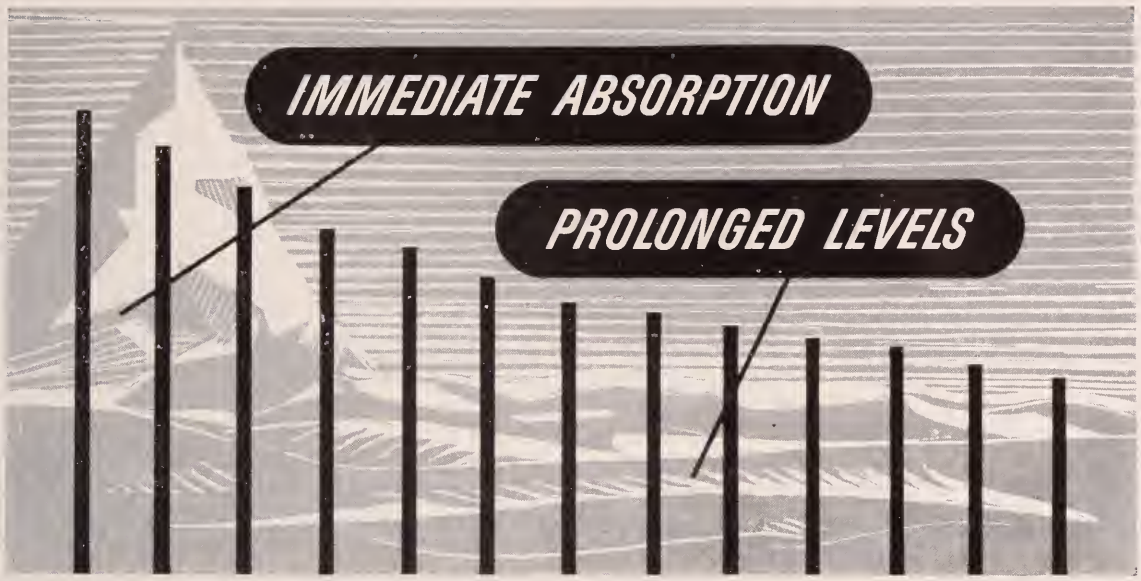
More than 100 separate diseases are considered. Each discussion is extensive and up to date. Antibiotics are thoroughly covered. Illustrations are abundant and the color plates are excellent.

This book contains an immense amount of information and is well worth the price the publishers are asking.

J. C. S.

THE ESOPHAGUS AND PHARYNX IN ACTION. A Study of Structure in Relation to Function. By William Lerche, M.D., Fellow American College of Surgeons; Founder Member and Honorary Member of the American Association for Thoracic Surgery; Formerly, Associate Professor of Surgery, University of

(*Continued on page* 84)



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BOOK REVIEWS (Continued)

Minnesota, Minneapolis, Minnesota. 229 pages. 226 references. 105 illustrations (most of which are original). Charles C. Thomas, Publisher, Springfield, Illinois, U.S.A. 1950. Price $5.50

This highly important study of the esophagus and pharynx sets forth in a most adequate manner the current knowledge pertaining to regurgitation and deglutition and on the action of the upper esophagus and the pharynx.

The original purpose of the research reported was to attempt to discover the mechanism of closure of the cardia. This goal attained a study of the mechanism of the esophagus followed, finally to encompass a study and this report on the relation of structure to function in the portion of the alimentary canal extending from cardia to pharynx.

Doctor Lerche has made an outstanding contribution to medical literature. His book will be an authoritative reference for internists, diagnosticians, radiologists, anatomists and general practitioners.

L. P. A. S.

The Preparation of Photographic Prints for Medical Publication. Stanley J. McComb. Charles C. Thomas, Publisher, Springfield, Illinois. This is a 69 page booklet with many illustrations. It is most attractively set and bound and will be a real aid to anyone with a great deal of experience or with very little experience in the mechanics and art of picture making with the camera. It is not only a well written book but short and to the point. The illustrations speak for themselves especially since the well selected titles and descriptions make clear the ideas portrayed. Many of his suggestions such as "Sharpness of Focus," "Scale Size and Position" with the advance suggestions for making pictures which are to be followed by others in the series for comparison, are well worth the reading of the entire volume. The Abstractor has been making medical photographs for publication and for lantern slides for thirty years but was intrigued by the mode of approach and the usable suggestions and illustrations as presented. It will be an addition to any doctor's library.

H. M. H.

The Clinical Use of Testosterone. By Dr. Henry H. Turner, F.A.C.P., Clinical Professor of Medicine, School of Medicine, University of Oklahoma. Publication Number 46. American Lecture Series. Charles C. Thomas, Springfield, Illinois, November 1, 1950, Price $2.25.

The 59 pages of this booklet are divided into six chapters as follows: Introduction; Chemistry; Physiology; Metabolism of Androgens; Therapeutics; and Preparations of the Male Sex Hormone.

The author carefully reviews the literature. He

(*Continued on page* 86)



Sodium Gentisate: A New Approach to the Treatment of Arthritis

It has been estimated[1] that nearly 7,000,000 people (at least one in every 20 persons) in the United States have some form of "rheumatic" disease. Rheumatism (with arthritis the most important single cause) ranks first in prevalence among diseases, and second in the production of disability and invalidism. It is more common than the total number of cases of tuberculosis, diabetes, cancer and heart disease combined.

The most common of the severe forms of the arthritides is rheumatoid arthritis. Although its etiology still remains uncertain, there are factors upon which there is general agreement.[2] (1) Rheumatoid arthritis has a definite tendency to be familial. (2) Eighty per cent of the cases occur between the ages of twenty and fifty with the peak at thirty-five to forty. (3) Females are more commonly affected than males in a ratio of 3:1. (4) Investigation shows that in the period preceding the onset of symptoms, emotional shocks are very common and this is frequently manifested by a severe depression.[3] (5) Pregnancy causes an amelioration of symptoms in a significantly high proportion.[4] (6) Involvement of the liver, as in infectious hepatitis, causes a definite remission in a significant number of patients.[5]

Since Klinge's[6] original work in 1929, evidence has been accumulating that both rheumatic fever and rheumatoid arthritis are diseases of the interfibrillar substance of the connective tissue.[7] The nature of this material is not well understood, although it is presumably a mucopolysaccharide in combination with a protein. This theory holds that changes in the cellular components are secondary to changes in the interfibrillar material. The composition of two of the mucopolysaccharides found in interfibrillar material is known: (a) chondroitin sulfuric acid, and (b) hyaluronic acid.[8] Changes in chondroitin sulfuric acid have been studied in hyaline cartilage which is affected to a considerable degree in rheumatoid arthritis.[9]

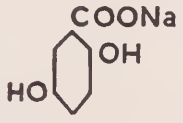
These changes have been on a purely morphological basis[9] and consist chiefly of destruction of hyaline cartilage, presumably due to interference with its blood supply by the overgrowth of pannus and granulation tissue, both beneath the subchondral plate and on the surface of the joint.

On the other hand, changes in the hyaluronic acid of the joint fluid have been shown to be present in active rheumatoid arthritis.[10,11] These changes in active disease consist of depolymerization of the hyaluronic acid and an increase in the total amount of hyaluronic acid present. The excessive presence of hyaluronidase, moreover, has been acknowledged to produce a denaturization of mucin in the synovial fluid, the varying degrees of which are valuable for their diagnostic as well as prognostic indications.[12] Clinicians[13] have concluded that the increase of hyaluronidase activity may be responsible for the breakdown of interfibrillar cement.

A rational approach to the problem, therefore, demands a therapeutic agent that will act to inhibit the spreading effect of hyaluronidase.

Meyer and Ragan[14] treated patients having rheumatoid arthritis and acute rheumatic fever with sodium gentisate, a hyaluronidase inhibitor. Their results were uniform and notably favorable. Within a few days there followed a disappearance of pain, swelling and joint inflammation.

The increase in urinary glucuronic acid observed with salicylates does not occur with gentisates. This phenomenon has been assigned to the rapid oxidation of the gentisates.[15] It is indeed likely, as shown by examination of the structural formulas of these two compounds, that the antirheumatic action of the salicylate in forestalling the spread of hyaluronidase[16] is attributed to its partial oxidation in the body to a gentisate.



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1. Hench, P. S. et al.: Ninth Rheumatism Review, Ann. Int. Med., 28:66 (1937).
2. Dawson, M. H. & Ragan, C.: Chronic Arthritis, Nelson's Loose Leaf Medicine, New York, Thomas Nelson & Sons, In Press.
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15. Quick, A. J.: J. Biol. Chem., 101:475 (1933).
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BOOK REVIEWS (Continued)

offers enough references that one who wishes to go into the subject in greater detail will find a course of reading carefully laid out for him. The chapter on Chemistry is especially well done.

His comments regarding the treatment of angina pectoris and prostatic hypertrophy will probably be received with enthusiasm by some and skepticism by others.

He points out the disadvantages, to the patient, of the policy of leaving hypogonad boys alone on the chance that maybe they will "grow out of it."

He pays a well deserved tribute to the pharmaceutical manufacturers.

Mr. Thomas did his usual skillful job in getting the booklet out. It is a publication any practitioner would do well to add to his library.

J. H. H.

A Textbook of Physiology—Originally by William H. Howell, M.D.: Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Sixteenth Edition. 1258 pages with 556 figures. Philadelphia and London: W. B. Saunders Company, 1949. Price $10.00.

This is the sixteenth edition of this standard textbook of physiology. It has been revised and reset. New material on the electrocardiograph and the endocrines has been added. Unfortunately the book came out just before the new work on adrenal cortical steroids was made public. For fundamentals of physiology, however, the book maintains the standards set by Howell.

J. C. S.

BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

Terminal Care for Cancer Patients — A survey of the facilities and services available and needed for the terminal care of cancer patients in the Chicago area. The Central Service for the Chronically Ill of the Institute of Medicine of Chicago, 1950. 211 pages.

Primer on Fractures — prepared by the Special Exhibit Committee on Fractures in Cooperation with the Committee on Scientific Exhibit of the American Medical Association. Sixth edition. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 1951. 109 pages. $2.00.

Atlas of Histologic Diagnosis in Surgical Pathology. By Karl T. Neuhuerger, M.D., Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado. With a section on

(*Continued on page* 88)


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BOOKS RECEIVED (Continued)

exfoliative cytology by Walter T. Wikle, B.S. M.S., M.D., Assistant Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado. Photographed by Glenn E. Mills, B.A., M.A., Department of Visual Education, University of Colorado School of Medicine, Denver, Colorado. The Williams & Wilkins Company, Baltimore, 1951. 460 pages. $11.00.

MEDICAL TREATMENT IN OBSTETRICS & GYNECOLOGY. By C. Frederic Fluhmann, B.A., M.D., C.M. Illustrated. The Williams & Wilkins Company, Baltimore, Maryland, 1951. 157 pages. $3.00.

PHARMACOLOGY. By Michael G. Mulinos, M.D., A.B., A.M., Ph.D., Associate Professor of Physiology and Pharmacology, New York Medical College, Flower and Fifth Avenue Hospitals, New York, New York. With a foreword by Charles C. Lieb, A.B., M.D., Hosack Professor Emeritus of Pharmacology, College of Physicians and Surgeons, Columbia University. Oxford University Press, New York, 1951. 484 pages. $5.00.

BRAIN METABOLISM AND CEREBRAL DISORDERS. By Harold E. Himwich, M.D., Chief, Clinical Research Branch, Medical Division, Army Chemical Center, Maryland. The Williams & Wilkins Company, Baltimore, 1951. 451 pages. $6.00.

NASAL SINUSES — an anatomic and clinical consideration. By O. E. Van Alyea, M.D., Associate Clinical

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1. Hill, L.W.: An Evaluation of Therapy in Infantile Eczema, J.A.M.A., 140: 139-141 (May 14) 1949.
2. Cooke, R.A.: A Consideration of Some Allergy Problems; Allergic dermatitis (Eczema), J. Allergy 15:203-211 (May) 1944.

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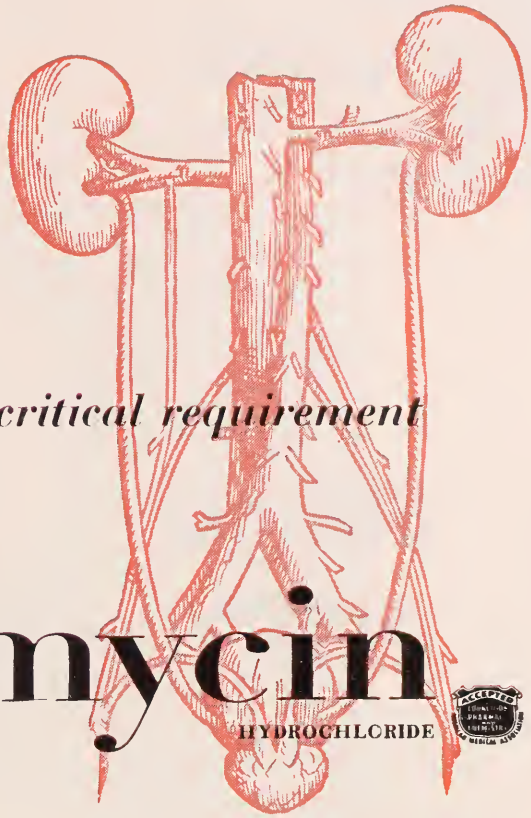
promotes healthy granulation, rapid epithelial repair; retards scar tissue formation; is particularly helpful in slow-healing, indolent wounds; pleasantly fragrant.

SUPPLIED IN 1½-OZ. TUBES AND IN 8-OZ. AND 16-OZ. JARS

WHITE LABORATORIES, INC., Pharmaceutical Manufacturers, Newark 7, N. J.

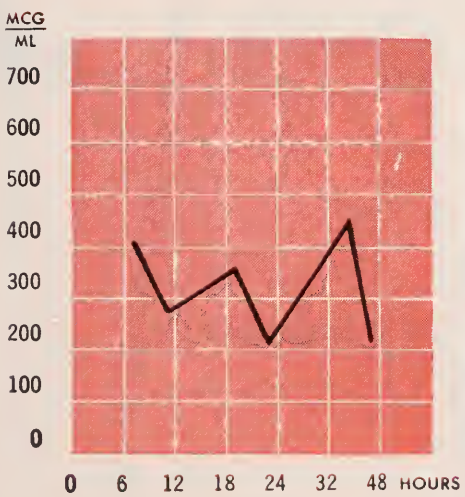
In the selection of an antibiotic for URINARY ANTISEPSIS

high urinary levels
rapidly achieved
and easily maintained
} *are a critical requirement*



CRYSTALLINE Terramycin HYDROCHLORIDE

concentration of Terramycin in the urine following divided oral doses: 0.5 Gm. q 6 h.[3]



This newest of the broad-spectrum antibiotics is stable and active in the urine. High levels are rapidly achieved and easily maintained by oral administration. Within one-half hour after a single 2 Gm. dose, detectable amounts have appeared in the urine.[1] and a single 0.5 Gm. dose has been shown to produce high concentrations lasting twenty-four hours.[2] When multiple doses are given, continuous urinary concentrations of Terramycin in the range of 300-400 mcg./ml. are obtained, as shown in the accompanying chart.[3]

These observations are given added significance by the highly satisfactory clinical experience and the prompt response obtained with Terramycin in a wide range of infections of the urinary tract.

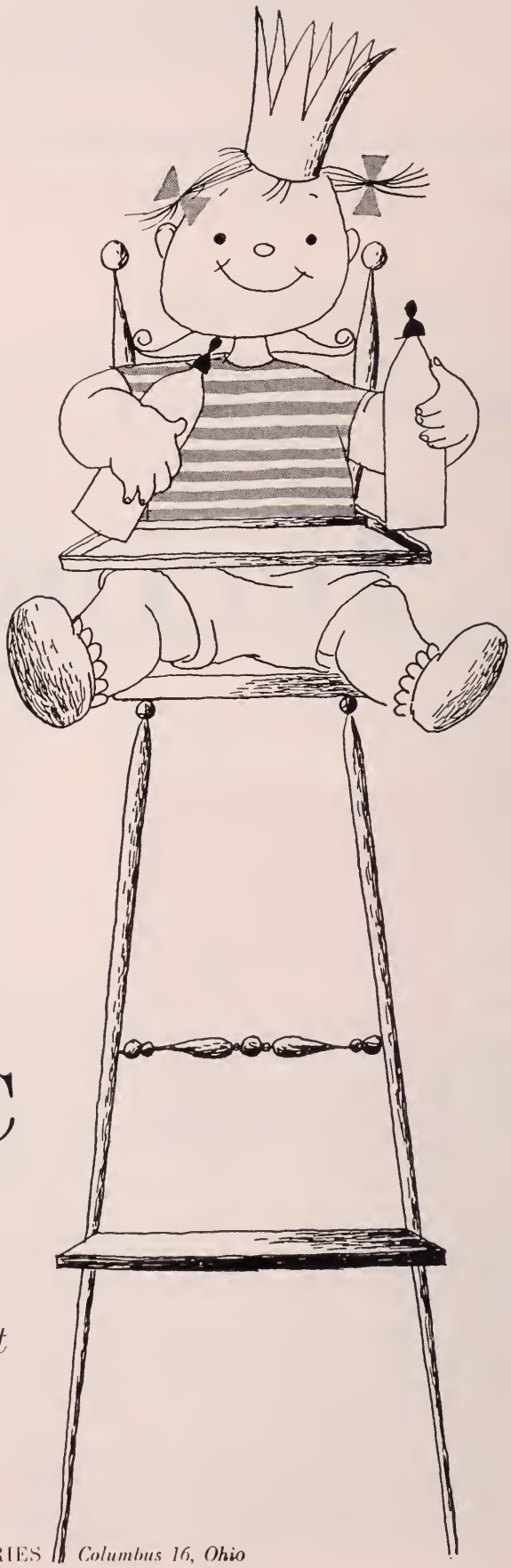
Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.

1. Schoenbach, E. B.; Bryer, M. S., and Long, P. H.: Ann. New York Acad. Sc. 53:245 (Sept. 15) 1950.
2. Welch, H.; Hendricks, F. D.; Price, C. W., and Rondall, W. A.: J. A. Ph. A. (Sc. Ed.) 39:185 (Apr.) 1950.
3. Welch, H.: Ann. New York Acad. Sc. 53:253 (Sept. 15) 1950.

Antibiotic Division Pfizer CHAS. PFIZER & CO., INC., *Brooklyn 6, N. Y.*

Sitting pretty...

That's the clinical picture shown by the infant started and maintained on SIMILAC from birth to birthday. Zero curd tension, adequate vitamin C supply and 1½ to 1 calcium-phosphorus ratio are but a few of the reasons why...

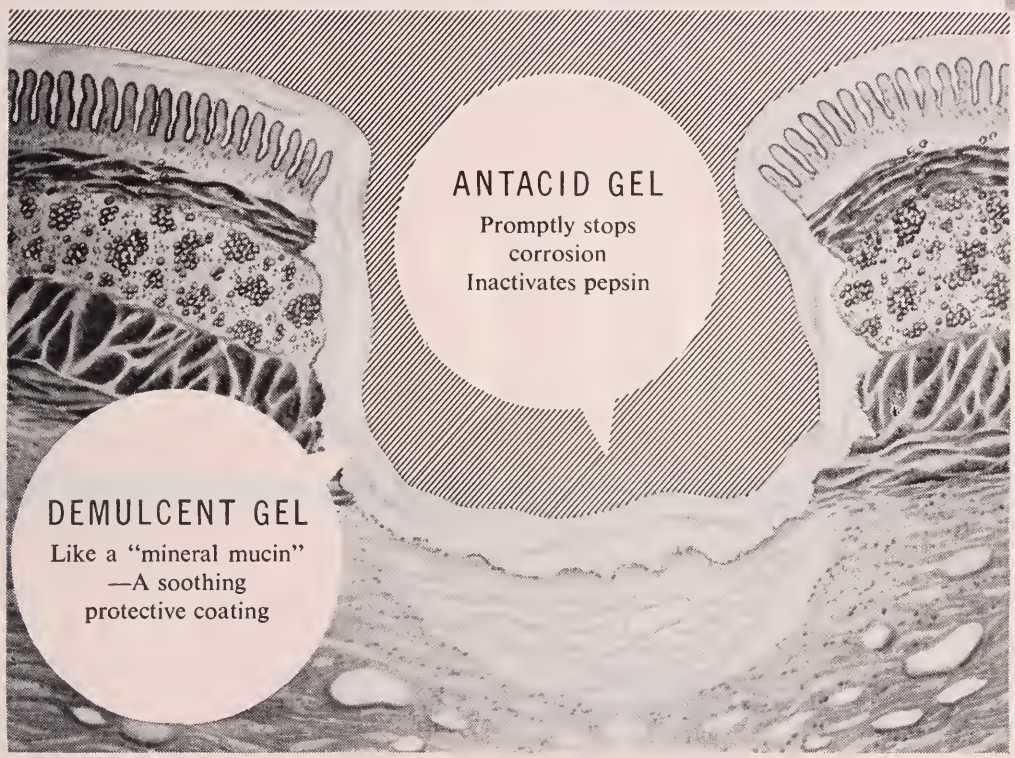


SIMILAC

is so similar to human breast milk that there is no closer equivalent

SIMILAC DIVISION • M & R LABORATORIES *Columbus 16, Ohio*

Wyeth®



In the Medical Management of Peptic Ulcer

AMPHOJEL Has Double-Gel Action
Relieves pain in minutes
Promotes rapid healing of ulcers

AMPHOJEL is Safe—does not interfere with normal body metabolism. No danger of alkalosis or acid rebound.

AMPHOJEL is pleasant to take, and is inexpensive.

SUPPLIED: *Bottles of 12 fl. oz.*

AMPHOJEL®

ALUMINUM HYDROXIDE GEL
ALUMINA GEL WYETH

Wyeth Incorporated, Philadelphia 2, Pa.

Gantrisin

'Roche'

antibacterial action plus...

■ greater solubility

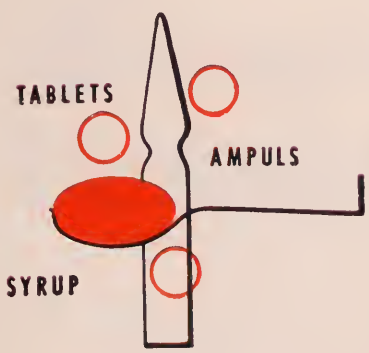
Gantrisin is a sulfonamide so soluble that there is no danger of renal blocking and no need for alkalinization.

■ higher blood level

Gantrisin not only produces a higher blood level but also provides a wider antibacterial spectrum.

■ economy

Gantrisin is far more economical than antibiotics and triple sulfonamides.



■ less sensitization

Gantrisin is a single drug—not a mixture of several sulfonamides—so that there is less likelihood of sensitization.

GANTRISIN®—brand of sulfisoxazole
(3,4-dimethyl-5-sulfanilamido-isoxazole)

HOFFMANN-LA ROCHE INC.

Roche Park • Nutley 10 • New Jersey

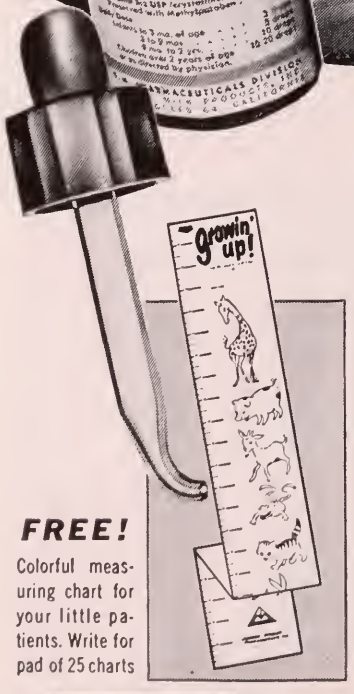


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In prescribing Vitamin B_{12} for stimulation of children's appetites and growth, be sure your patient receives the preferred *crystalline* B_{12} . . . the only form admitted to the United States Pharmacopeia.

Sol Dex provides crystalline B_{12} in convenient drop dosage form—easy to use, tasteless and colorless. Stabilized to contain 10 micrograms of Vitamin B_{12} per cc (approx 20 drops). Prescribe Sol Dex!

Now supplied in 15 and 30 cc bottles with special dropper.



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MEYENBERG EVAPORATED GOAT MILK



Samples and literature upon request

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Introducing

LUBRICOID ACTION *without oil*

IN CONSTIPATION MANAGEMENT



—presents methylcellulose as a gel, with magnesium hydroxide in less than laxative dosage to maintain hydration of the gel by osmosis.

Each tablespoonful contains:

METHYLCELLULOSE	0.3 GM.
MAGNESIUM HYDROXIDE	0.6 GM.

The Turicum formula assures:

- lubricous bulk to encourage normal evacuation
- good distribution throughout the bowel
- no bloating
- no danger of impaction
- no interference with utilization of oil-soluble vitamins
- no danger of lipid pneumonia
- no leakage

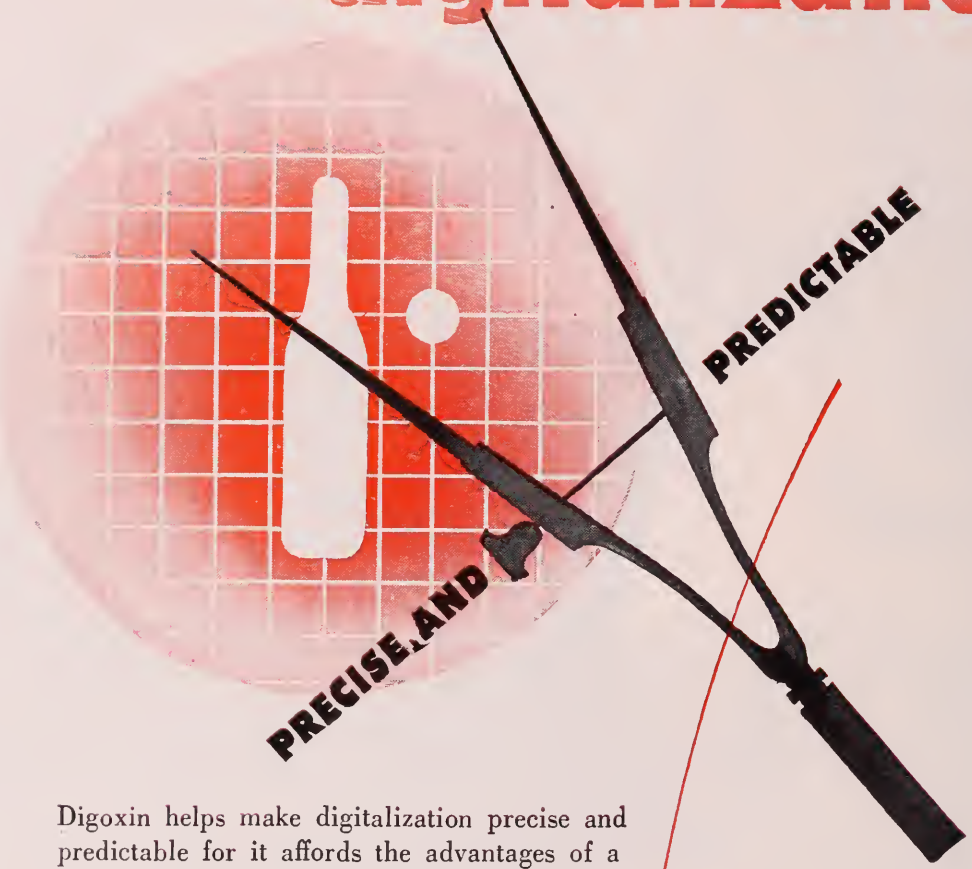
TURICUM IS AVAILABLE IN ONE PINT BOTTLES

TURICUM
TRADE MARK
HYDROPHILIC LUBRICOID

Whittier
LABORATORIES

DIVISION NUTRITION RESEARCH LABORATORIES, INC. • CHICAGO 11, ILLINOIS

digitalization



Digoxin helps make digitalization precise and predictable for it affords the advantages of a pure drug of constant, unchanging potency, thus allowing more accurate administration than is possible with crude digitalis preparations assayed in biological units.

Unvarying in its substance and potency, Digoxin maintains a desirable intermediate position among the rapidly acting glycosides. Rapid uniform absorption provides a means of slow or swift digitalization orally as well as parenterally. Rapid elimination minimizes duration of possible toxic effects.

The average digitalized patient on a maintenance dose of 1½ to 3 grains of whole leaf digitalis per day may be switched to maintenance with Digoxin with an initial trial daily dose of 0.5 mg. (2 'Tabloid' Digoxin) and adjusted subsequently in accord with his needs.

DIGOXIN 'B.W. & CO.'®

a crystalline glycoside of Digitalis lanata

BURROUGHS WELLCOME & CO. (U.S.A.) INC. TUCKAHOE 7, NEW YORK

for the

tense and

nervous patient



There's double therapeutic action in Eskaphen B Elixir:

1 . . . **Therapeutic relaxation . . .** mild, calming sedation of phenobarbital—to ease tension, to quiet nervousness.

2 . . . **Restoration of appetite . . .** high dosages of thiamine —to remedy the B_1 deficiency so often present in these patients, to restore appetite and improve general nervous tone.

Remember that each 5 cc. teaspoonful of Eskaphen B Elixir contains phenobarbital, ¼ gr.; thiamine, 5 mg.—nearly three times the recommended daily allowance of thiamine.

Smith, Kline & French Laboratories, Philadelphia

Eskaphen B Elixir

the delightfully palatable combination of phenobarbital and thiamine

'Eskaphen B' T.M. Reg. U.S. Pat. Off.



relief!



the measure of a good hemorrhoidal suppository . . . . . .

ANUSOL* 'WARNER' *HEMORRHOIDAL SUPPOSITORIES*



Preferred and Prescribed by Physicians for more than half a Century.

ANUSOL* HEMORRHOIDAL SUPPOSITORIES promptly and effectively relieve the pain and discomfort of the common anorectal disorders.



ANUSOL* HEMORRHOIDAL SUPPOSITORIES do not contain narcotic or analgesic drugs which may mask more serious anorectal disorders.

For best results one ANUSOL* in the morning and at bedtime and immediately following each evacuation.

ANUSOL* 'WARNER'

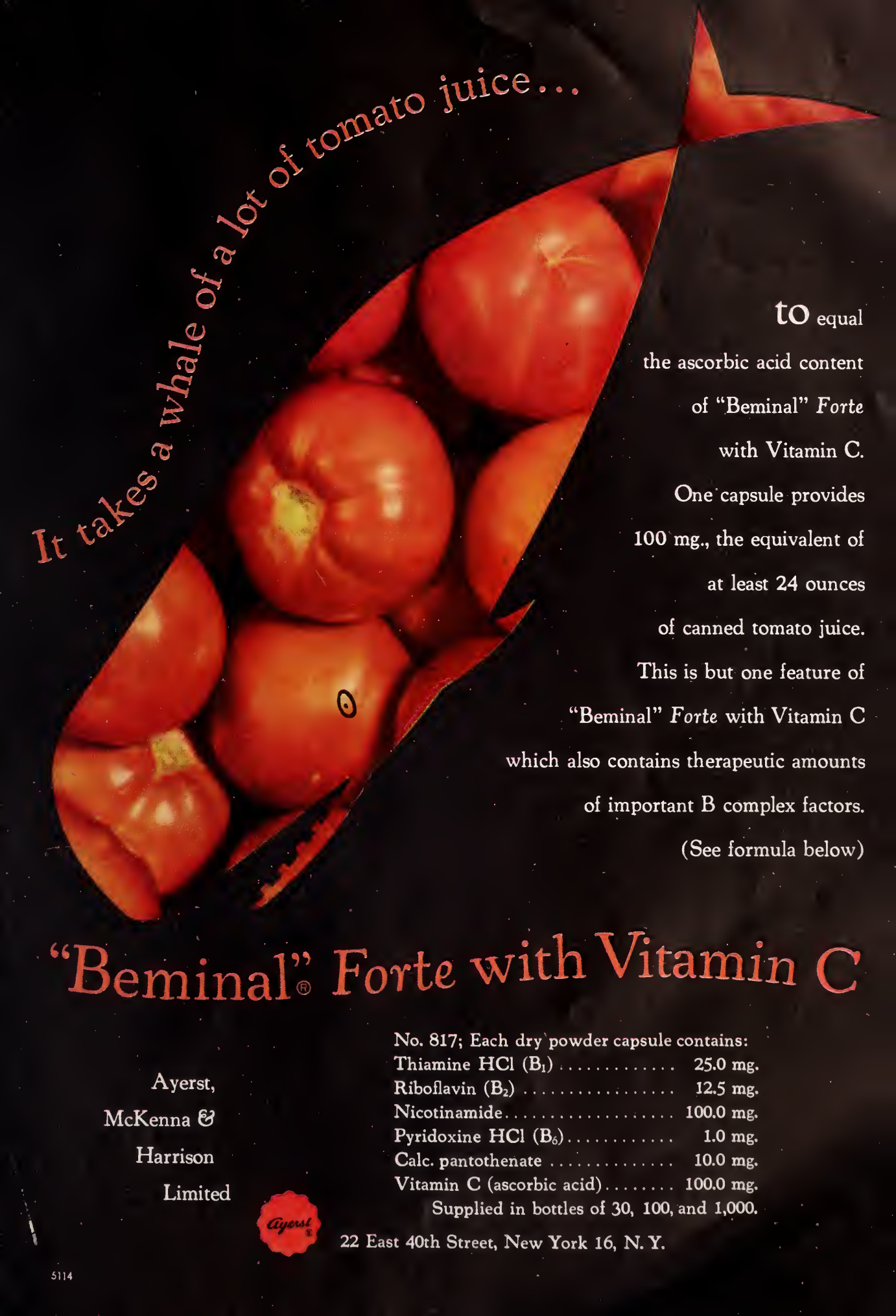
HEMORRHOIDAL SUPPOSITORIES, individually foil wrapped, are available in boxes of 6, 12 and 48.

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to equal the ascorbic acid content of "Beminal" *Forte* with Vitamin C. One capsule provides 100 mg., the equivalent of at least 24 ounces of canned tomato juice. This is but one feature of "Beminal" *Forte* with Vitamin C which also contains therapeutic amounts of important B complex factors. (See formula below)

"Beminal"® *Forte* with Vitamin C

No. 817; Each dry powder capsule contains:

Thiamine HCl (B_1)	25.0 mg.
Riboflavin (B_2)	12.5 mg.
Nicotinamide	100.0 mg.
Pyridoxine HCl (B_6)	1.0 mg.
Calc. pantothenate	10.0 mg.
Vitamin C (ascorbic acid)	100.0 mg.

Supplied in bottles of 30, 100, and 1,000.

Ayerst, McKenna & Harrison Limited

Ayerst®

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"PREMARIN"

WITH

METHYLTESTOSTERONE



wherever combined estrogen-androgen therapy is indicated



i.e. in fractures and osteoporosis in either sex to promote bone development, tissue growth, and repair.

i.e. in the female climacteric in certain selected cases.

i.e. in dysmenorrhea in an attempt to suppress ovulation on the basis that anovulatory bleeding is usually painless.

i.e. in the male climacteric to reduce follicle-stimulating hormone levels.

"Premarin"® with Methyltestosterone

for combined estrogen-androgen therapy

A steroid combination which permits utilization of both the complementary and the neutralizing effects of estrogen and androgen when administered concomitantly. Thus certain properties of either sex hormone may be employed in the opposite sex with a minimum of side effects.

Availability: Each tablet provides estrogens in their naturally occurring, water-soluble, conjugated form expressed as sodium estrone sulfate, together with methyltestosterone.

No. **879**—Conjugated estrogens equine ("Premarin") ....1.25 mg.
Methyltestosterone .....10.0 mg.
Bottles of 100 tablets (yellow)

No. **878**—Conjugated estrogens equine ("Premarin") ...0.625 mg.
Methyltestosterone .....5.0 mg.
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Ayerst®

Ayerst, McKenna & Harrison Limited
22 East 40th Street, New York 16, N. Y.



NOW PROOF . . . in an instant, Doctor, PHILIP MORRIS are LESS IRRITATING

Just Make This Simple Test:





1 . . . light up a PHILIP MORRIS

Take a puff—DON'T INHALE. Just s-l-o-w-l-y let the smoke come through your nose. Easy, isn't it? AND NOW . . .

2 . . . light up your present brand

DON'T INHALE. Just take a puff and s-l-o-w-l-y let the smoke come through your nose. Notice that bite, that sting? Quite a difference from PHILIP MORRIS!

YES, your own *personal experience* confirms the results of the clinical and laboratory tests.* With proof so conclusive, would it not be good practice to suggest PHILIP MORRIS to your patients who smoke?

PHILIP MORRIS

Philip Morris & Co., Ltd., Inc.
100 Park Avenue, New York 17, N. Y.

**Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245; N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592; Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60*

TRUE STIMULANT THERAPY.



ACTHAR represents the natural stimulus for the adrenal glands to secrete the entire spectrum of cortical hormones at a rapidly increased rate. Thus the role of ACTHAR is to provide true stimulation therapy in a wide variety of diseases. ACTHAR neither substitutes nor replaces individual cortical hormones. Mobilization of physiologic mechanisms accounts for the safety of ACTHAR and permits prolonged courses of treatment without rest periods.

ESTABLISHED INDICATIONS: Collagen diseases or connective tissue diseases, such as rheumatoid arthritis, rheumatic fever, acute lupus erythematosus; hypersensitivities, such as severe asthma, drug sensitivities, contact dermatitis; most acute inflammatory diseases of the eye; acute inflammatory conditions of the skin, such as acute pemphigus and exfoliative dermatitis; inflammatory conditions of the intestinal mucosa, such as ulcerative colitis; and metabolic diseases, such as acute gouty arthritis and secondary adrenal cortical hypofunction.

Literature and directions for administration of ACTHAR, including contraindications, available on request.

ACTHAR is available in 10, 15, 25 and 40 milligram vials.

ACTHAR

ARMOUR LABORATORIES BRAND OF ADRENOCORTICOTROPIC HORMONE (A. C. T. H.)

THE ARMOUR LABORATORIES

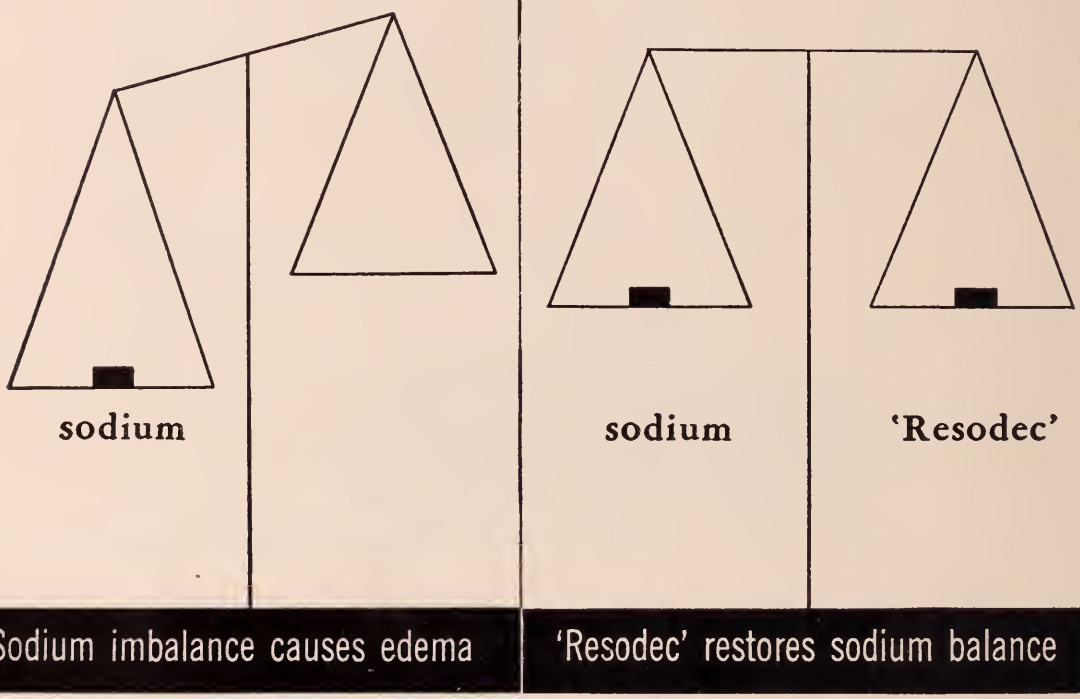
CHICAGO 11, ILLINOIS

announcing:

'Resodec'

for sodium control

not a diuretic! not a salt substitute!



What it is: 'Resodec' is a remarkable new substance* that has the ability to remove excess sodium from the contents of the intestinal tract and to carry it out of the body in the feces.

What it does: 'Resodec' produces the approximate effect of *halving* the patient's salt intake—thus assuring adequate sodium control, with a minimum of dietary restriction.

For complete details, see professional literature—available upon request.

the first **positive** means of achieving **adequate sodium control in congestive heart failure**

Smith, Kline & French Laboratories, Philadelphia

'Resodec' Trademark *Polycarboxylic cation exchange compound

No activity pause at her menopause



Your patient may continue her normal activities even to the extent of keeping pace with her daughter. She will be greatly encouraged, especially when the effectiveness of therapy measures up to expectations. In estrogen therapy an especially useful product . . . . . is:

BENZESTROL

2,4 (p-hydroxyphenyl) – 3 – ethyl hexane

"Liver function tests, blood studies and urine examinations showed no toxic effects of the synthetic substance BENZESTROL"*

Supplied:

Oral: ***Benzestrol*** **Tablets**
0.5 Mg., 1.0 Mg., 100's & 1000's, 2 Mg., 5 Mg. — 50's — 100's — 1000's.

Benzestrol **Elixir:**
15 Mg. per fluid ounce, Pint Bottles.

Intramuscular: ***Benzestrol*** **Solution in Oil; Aqueous Suspension with 5% Benzyl Alcohol**
5.0 Mg. per cc. 10cc Vials.

Local: ***Benzestrol*** **Vaginal Tablets**
0.5 Mg. 100's.

AVERAGE DOSE: Menopause — 2 to 3 Mg. daily orally or ½ to 1cc parenterally every 5 days.

Professional Samples and Literature upon Request

NOTE:
Frequently, medication other than estrogens may be required during the menopause. Pleasant tasting Elixir Benzestrol is compatible with many substances.

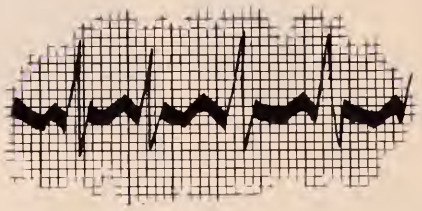
*Reference: MacBryde, C. M., et. al., A New Synthetic Estrogen, J.A.M.A., 123: 261: 264-(10-3) 43.

Schieffelin & Co. 20 Cooper Square, New York 3, N. Y.

Effective against many bacterial, and rickettsial infections, as well as certain protozoal and large viral diseases.

AUREOMYCIN

Hydrochloride Crystalline



The Internist today is less concerned than in former years over cases of pneumonia. Once highly fatal, this disease has been all but conquered by modern chemotherapy. For many pneumonias—bacterial, rickettsial or viral—aureomycin is often a preferred drug.

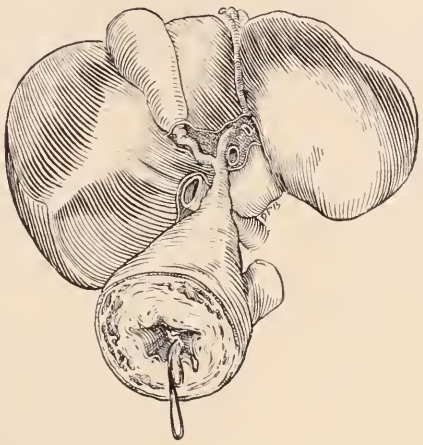
Packages

Capsules: Bottles of 25 and 100, 50 mg. each capsule. Bottles of 16 and 100, 250 mg. each capsule.
Ophthalmic: Vials of 25 mg. with dropper; solution prepared by adding 5 cc. of distilled water.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY
30 Rockefeller Plaza, New York 20, N.Y.

Physiologic

IN GALLBLADDER MANAGEMENT





NUBILIC represents the modern trend in the management of inflamed and congested gallbladder and bile ducts.

NUBILIC contains dehydrocholic acid, an efficient hydrocholeretic agent which thins the liver bile and flushes the biliary passages.

NUBILIC contains belladonna, which encourages free drainage and relaxes the sphincter of Oddi. This action is further enhanced by the central sedation of phenobarbital.

NUBILIC

Each Nubilic Tablet contains:

Dehydrocholic acid	0.25 Gm. (3¾ gr.)
Phenobarbital	8 mg. (⅛ gr.)
Belladonna	8 mg. (⅛ gr.)

Bottles of 25, 50 and 100 tablets

NUMOTIZINE, Inc.

900 N. Franklin Street • Chicago 10, Illinois, U.S.A.



In Acute Exanthems —

The fever of measles, the pruritus of chickenpox or the sore throat of scarlet fever will find pleasant relief in Aspergum.

For childhood's pains and fevers, Aspergum is ideal—it is willingly accepted by the patient and it presents acetylsalicylic acid in a rapidly effective form.

Aspergum is promoted ethically; is not advertised to the public.

Each pleasantly flavored tablet of Aspergum contains 3½ grains of acetylsalicylic acid—a dosage form uniquely fitted to childhood requirements.

aspergum

THALAMYD®

(brand of phthalylsulfacetimide)

eliminate intestinal organisms



SIMPLY
AND
SAFELY

Unique among nonabsorbable sulfonamides, THALAMYD is actually absorbed into the bowel wall in high concentration but only slightly absorbed into the blood stream.

Simple, safe therapy whenever the intestinal tract must be sterilized, THALAMYD has a broad field of usefulness: *prophylactically when preparing the gut for surgery; for bacillary dysentery and other acute enteritis; and to control secondary invaders in ulcerative colitis.*

Schering CORPORATION · BLOOMFIELD, NEW JERSEY

THALAMYD

SCHERING

a new product

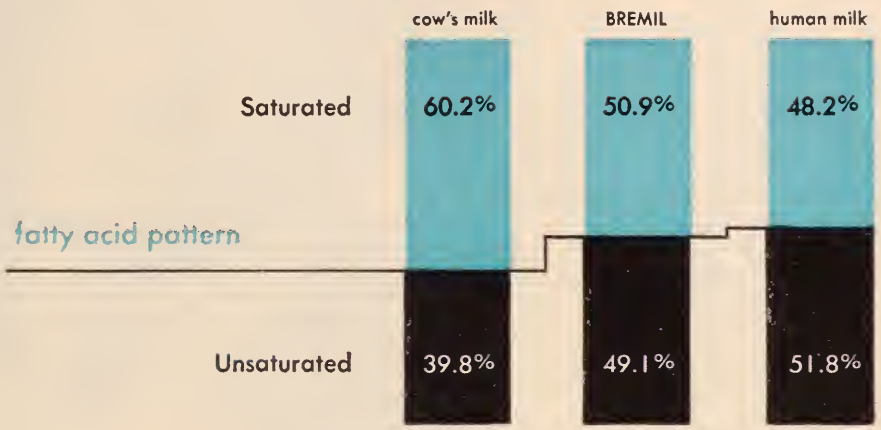


approaching the fatty acid pattern of human milk



A correct fatty acid pattern is highly desirable in infant foods. The percentages of saturated and unsaturated fatty acids in BREMIL approach the pattern of human milk. This is achieved in BREMIL by a careful blending of three scientifically chosen vegetable oils—palm, coconut, and peanut—which resemble human milk in nutritional characteristics.[1]

The fatty acids of human milk and BREMIL are divided nearly evenly between saturated and unsaturated, whereas cow's milk shows a much greater percentage of the more irritant saturated fatty acids.[2] Moreover, the fat in BREMIL, like the fat in human milk, is in a fine state of emulsion. As a result, BREMIL is well-tolerated, well-digested, and well-assimilated.



Nor is the scientific fatty acid pattern the only unique attribute of BREMIL

BREMIL has an adjusted calcium-phosphorus ratio (1½:1)[3,4]... BREMIL supplies adequate vitamin C and other vitamins... BREMIL contains the same carbohydrate as in human milk[5]... BREMIL forms curds of small particle size.

BREMIL formula preparation is as rapid as with a liquid product (no need to make into a paste)... Standard dilution is 1 level tablespoonful and 2 fl. oz. water... Each level tablespoonful BREMIL powder supplies 44 calories.

Complete information and a trial supply may be obtained upon request.

BREMIL is available in drugstores in 1 lb. cans.

flexible, palatable, easy to prepare



Bremil®

powdered infant food

Prescription Products Division

The **BORDEN** Company 350 Madison Avenue, New York 17

1. Macy, I. G.: *J. Dis. Children* 78:589, 1949.
2. Jeans, P. C., and Marriott, W. McK.: *Infant Nutrition*, 4th ed., 1947.
3. Gardner, L. I., Butler, A. M., et al.: *Pediatrics* 5:228, 1950.
4. Nesbit, H. T.: *Texas State J. M.* 38:551, 1943.
5. *Bull. National Research Council*, No. 119, Jan. 1950.



Here is the patient who can benefit most from

VERILOID*

IN HYPERTENSION

The patient with moderate hypertension, who constitutes the great bulk of hypertensives seen clinically, is the one that can benefit most from Veriloid. In his management, dosage is more simple, and the clinical response is as a rule excellent.

By controlling hypertension in its earlier stages, much can be accomplished. Many organic changes directly related to a sustained elevation of blood pressure can be prevented, expanding the years of physical and mental usefulness of the patient.

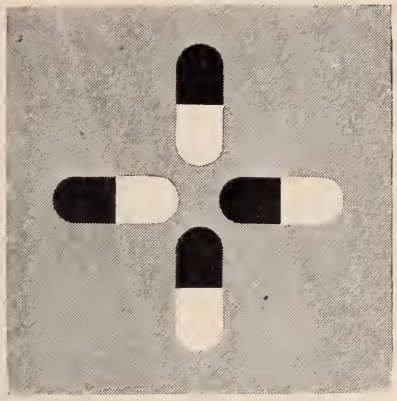
Veriloid—a distinctive, biologically standardized fraction of Veratrum viride—exerts its well-defined hypotensive action without sacrifice of postural reflexes so important for comfortable living. The average dose of from 2.0 to 5.0 mg. four times daily after meals and at bedtime usually produces a significant, sustained reduction in arterial tension. For optimal results, dosage should be carefully adjusted to the needs and tolerance of the individual patient.

NOW AVAILABLE IN THREE DOSAGE UNITS

Veriloid is now available in 3 tablet sizes—1 mg., 2 mg., and 3 mg. tablets. The larger tablets are especially useful after dosage needs have been established and are more economical for the patient. Literature available on request.

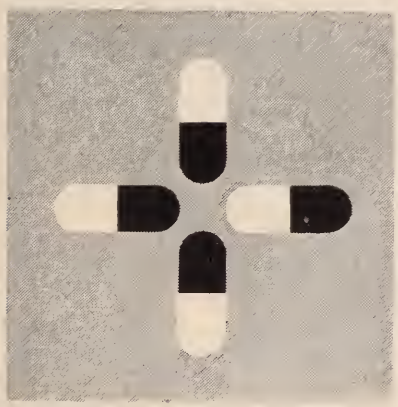
*Trade Mark of Riker Laboratories, Inc.

RIKER LABORATORIES, INC. • 8480 BEVERLY BOULEVARD, LOS ANGELES 48, CALIFORNIA



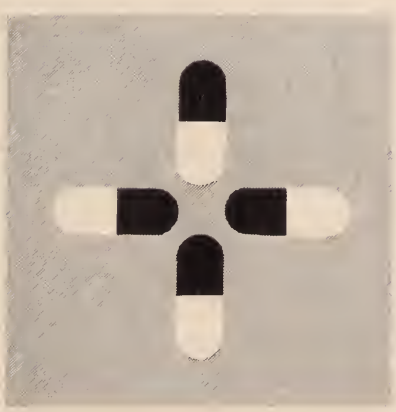
the ideal single preparation for ill-defined secondary anemias

Feosol Plus



Feosol Plus combines—in a carefully balanced formula—ferrous sulfate (grain for grain the most effective form of iron), liver, and seven other factors essential to optimal production of red blood cells. It is, therefore, most useful for the treatment of those ill-defined secondary anemias which resist treatment with iron alone.

Look what each capsule contains!



Ferrous sulfate, exsiccated	200.0 mg.
Desiccated liver, N.F.	325.0 mg.
Folic acid	0.4 mg.
Thiamine hydrochloride (B_1)	2.0 mg.
Riboflavin (B_2)	2.0 mg.
Nicotinic acid (Niacin)	10.0 mg.
Pyridoxine hydrochloride (B_6)	1.0 mg.
Ascorbic acid (C)	50.0 mg.
Pantothenic acid	2.0 mg.

Dosage– 3 capsules daily, one after each meal

Packaged—in bottles of 100 capsules

Feosol Plus by no means replaces 'Feosol'—the standard therapy in simple iron-deficiency anemias.

'Feosol Plus' T.M. Reg. U.S. Pat. Off.

Smith, Kline & French Laboratories, Philadelphia

Have you tried the Aerohalor

in treating

secondary invaders

of the Common Cold?



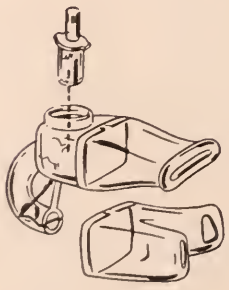
Let us make this point clear at the beginning. We do not recommend penicillin powder inhalation therapy with the AEROHALOR as a cure for the virus cold. It is not. But Krasno and Rhoads[1] have some interesting observations:

"The course of ordinary colds is strikingly shortened by prompt use of the penicillin dust inhalation. We have no illusions that it is effective against virus that initiates the common cold or any other viruses."

The authors also report: "We are fully aware that the etiologic agent of the common cold is probably not a penicillin-sensitive organism. Secondary invaders undoubtedly account for the accentuation of the initial symptoms and in most instances for the more serious complications. Dramatic results often are seen in those patients in whom the cold has been hanging on."

As to the therapeutic effectiveness of inhaled penicillin dust, Krasno and Rhoads state "with assurance" that "bacterial infections of the nasopharynx, para-nasal sinuses, nasal mucosa, larynx and trachea of fairly recent origin, respond well to this form of treatment."

The smoke-it-like-a-pipe therapy afforded by the AEROHALOR is convenient and effective. For the complete story, write for comprehensive literature to Abbott Laboratories, North Chicago, Illinois. Abbott



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(ABBOTT'S POWDER INHALER)

AEROHALOR comes assembled with detachable mouthpiece. Easily interchangeable nosepiece included in package. Disposable AEROHALOR* Cartridge containing 100,000 units of finely powdered penicillin G potassium is prescribed separately—supplied three to an air-tight vial, four vials to the package.

*Trade Mark for Abbott Sifter Cartridge. AEROHALOR and AEROHALOR Cartridge patented in U. S. and Foreign Countries.

1. Krasno, L., and Rhoads, P. (1949), The Inhalation of Penicillin Dust; Its Proper Role in the Management of Respiratory Infections, Amer. Prac., 11:649, July.



how to avoid this

The sudden summons is no stranger to the Picker X-ray service engineer, any more than it is to you, doctor. But emergencies like this, costly to everyone involved, can often be forestalled by having your Picker man in occasionally to check your equipment.

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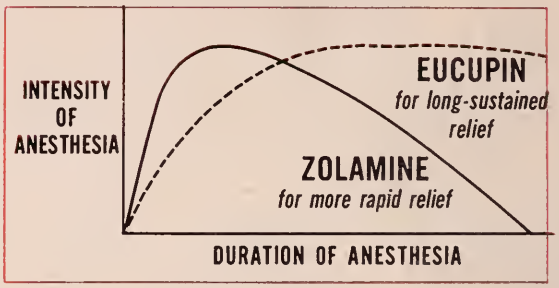
Now...more rapid, more sustained relief of earache

New combination of complementary local analgesics, *quick-acting* zolamine and *long-acting* Eucupin, gives more rapid and more sustained relief of otalgia.

As compared to benzocaine and chemically related compounds, zolamine and Eucupin are more potent and therefore produce a clinically more desirable local analgesic effect.

Otodyne is slightly viscous, thus adherence of the active ingredients to the epidermal surface is promoted. Hygroscopic action effects mild decongestion.

NEW—two analgesics combined for complemental effect



Formula:

Zolamine (N, N-dimethyl-N'2-thiazolyl-N'-p-methoxybenzyl-ethylenediamine)	1%
Eucupin® dihydrochloride*	0.1%
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Dropper bottles of ½ fluid ounce (15 cc.)

White's OTODYNE® NEW ANALGESIC EAR DROP



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*"Eucupin"—Brand of isoamylhydrocupreine is a registered trademark of White Laboratories, Inc.



"pins and needles" of dysmenorrhea

Many of your patients are on "pins and needles" just before and during menstruation because of the nervous and emotional upset, mental anguish and physical suffering which accompany such common complaints as dysmenorrhea and premenstrual tension. You'll find that in many cases the use of Progestoral (anhydro-hydroxy-progesterone)—Organon's orally effective form of the luteal hormone—will provide for your patients rapid and effective relief from these distressing menstrual disorders which so frequently interfere with women's occupational tasks and home life. Usually you need prescribe only 10 mg of Progestoral per day during the last 7 to 10 days of the cycle to provide relief from premenstrual tension and dysmenorrhea. Progestoral is available in 5-mg, 10-mg, and 25-mg tablets.

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to spare your patient the dread

recurrence of **anginal pain . . .**

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a superior presentation of KHELLIN

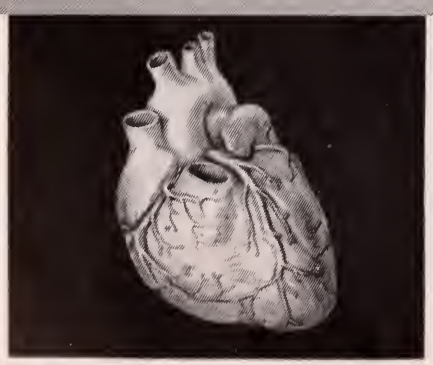
Eskel's advantages are five:

1. 'Eskel' has at least 5 times the coronary dilating activity of aminophyllin in the isolated heart.
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4. In therapeutic doses, it has no demonstrable effect on blood pressure or pulse rate.
5. There is no evidence that patients develop a tolerance to 'Eskel'.

Smith, Kline & French Laboratories, Philadelphia

'Eskel' T.M. Reg. U.S. Pat. Off.

a promising new attack on the problems of angina pectoris



and bronchial asthma

in intractable peptic ulcer

when other therapy fails

KUTROL®

peptic ulcer inhibitant

Controlled studies with intractable peptic ulcer patients show these advantages:

beneficial response in up to 70 to 80 per cent of patients

Noteworthy results in patients with ulcer of long duration and where conventional methods have failed.[1]

remission of ulcer often in a matter of weeks

Rapid relief of symptoms and disappearance of ulcer crater. The beneficial action of KUTROL is believed to be due to fibroblastic proliferation, new formation of blood vessels and epithelization of the mucosa.

simplified regimen

Normal three-meals-a-day schedule as soon as the condition of the patient warrants. Unlike older methods of treatment KUTROL therapy does not require a continuous restricted dietary regimen for an indefinite period of time.

well-tolerated

No toxicity, intolerance or idiosyncrasy noted.

KUTROL (urocnterone, Parke–Davis), also known as uroanthelone, contains a non-estrogenic factor or factors which alleviates the symptoms and stimulates healing of crateriform peptic ulcers.[2,3] The usual dosage is two KUTROL Kapseals® four times daily, one-half hour before mealtimes and at bedtime. KUTROL is not intended for use in cases of surgical complications, including pyloric obstruction, penetrating or perforating ulcer, or in those cases of gastric or other ulcer in which a possibility of malignancy exists.

KUTROL Kapseals, 75 mg., are supplied in bottles of 100.

References:

1. Page, R. C., and Heffner, R. R.: Oral Treatment of Chronic Duodenal and Jejunal Ulcers with an Extract of Pregnant Mares' Urine, Gastroenterology *11*:842, 1948.
2. Sandweiss, D. J.: The Present-Day Treatment of Duodenal Ulcer, Pennsylvania M. J. *52*:1543, 1949.
3. Sandweiss, D. J.; Saltzstein, H. C.; Scheinberg, S. R., and Parks, A.: Hormone Studies in Peptic Ulcer, J.A.M.A. *144*:1436, 1950.

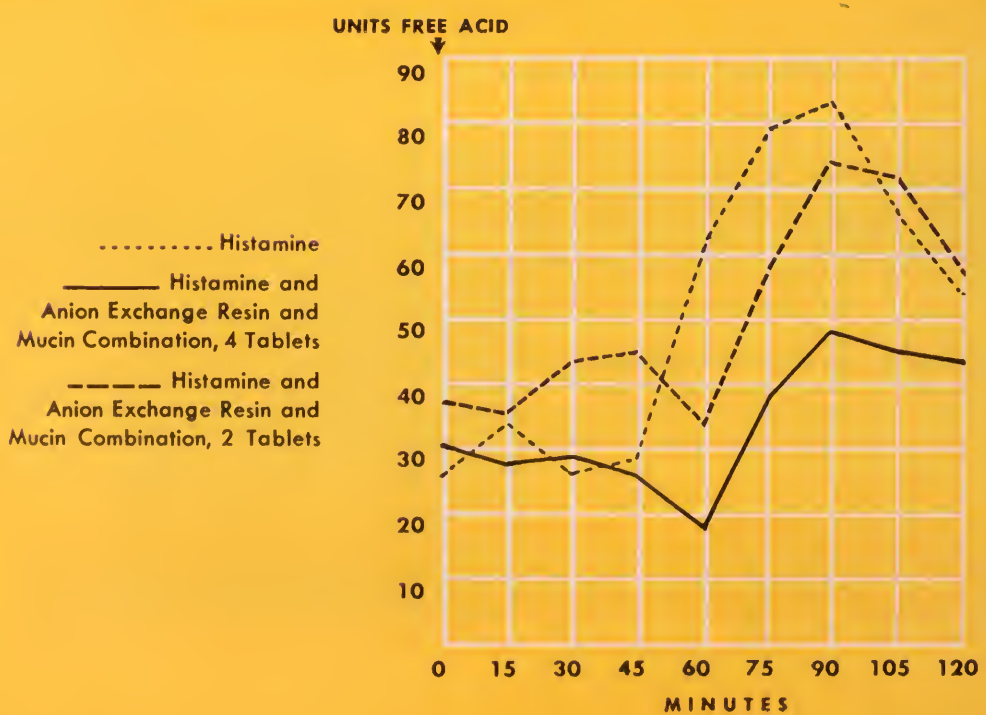
Descriptive Literature Available On Request

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"...the good effects of resins with those of gastric mucin in the treatment of gastroduodenal ulcer."*





Resmicon®

MUCOPROTECTIVE, ACID-ADSORBENT, PEPSIN INACTIVATING

The introduction of Resmicon provides the physician with a new physiologically correct medicament for application to the problem of peptic ulcer management.

AN EXAMPLE OF TRUE SYNERGISM

Resmicon offers two synergistic components— (1) a fine-mesh resin for rapid, safe symptomatic control of hyperacidity; (2) the added protective coverage action of viscous natural mucin.

CLINICAL EVALUATION

Steigmann and Schlesinger* were most favorably impressed with the rationale and clinical value of Resmicon during their intensive 5-year study of the peptic ulcer problem.

Resmicon was given to a series of patients over a period of 2 to 15 months —*most of the patients being those who did not respond well to other antacid therapy.*

THE FINDINGS

The investigators found that most patients experienced *quick relief;* moreover *healing* was encouraged and the conclusion was drawn that—

> ". . . the admixture of gastric mucin enhances the antacid effect of the resins . . ."*

QUICK RELIEF

"Most patients had good symptomatic relief within the first week (2 to 7 days) of 'Resmicon' treatment . . . They felt better, ate better and gained weight. The majority took the tablets well and there were no complaints regarding constipation or diarrhea."

HEALING ENCOURAGED

"Simultaneously with clinical improvement the patients with gastric ulcer showed significant changes in the size of the craters when x-rays were taken at weekly or bi-monthly intervals. Those who were gastroscoped (a total of 19) also showed healing of the ulcer."

RESMICON *is supplied in bottles of 84 tablets.*

*Steigmann, F., and Schlesinger, R. B.: A Resin-Gastric Mucin Mixture in the Medical Management of Peptic Ulcer, American J. Dig. Dis. *17*:361-365 (Nov.) 1950.

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No nipple clogging
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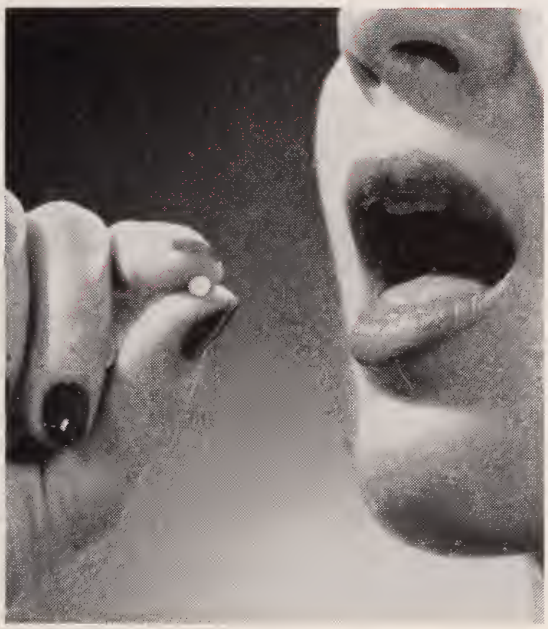
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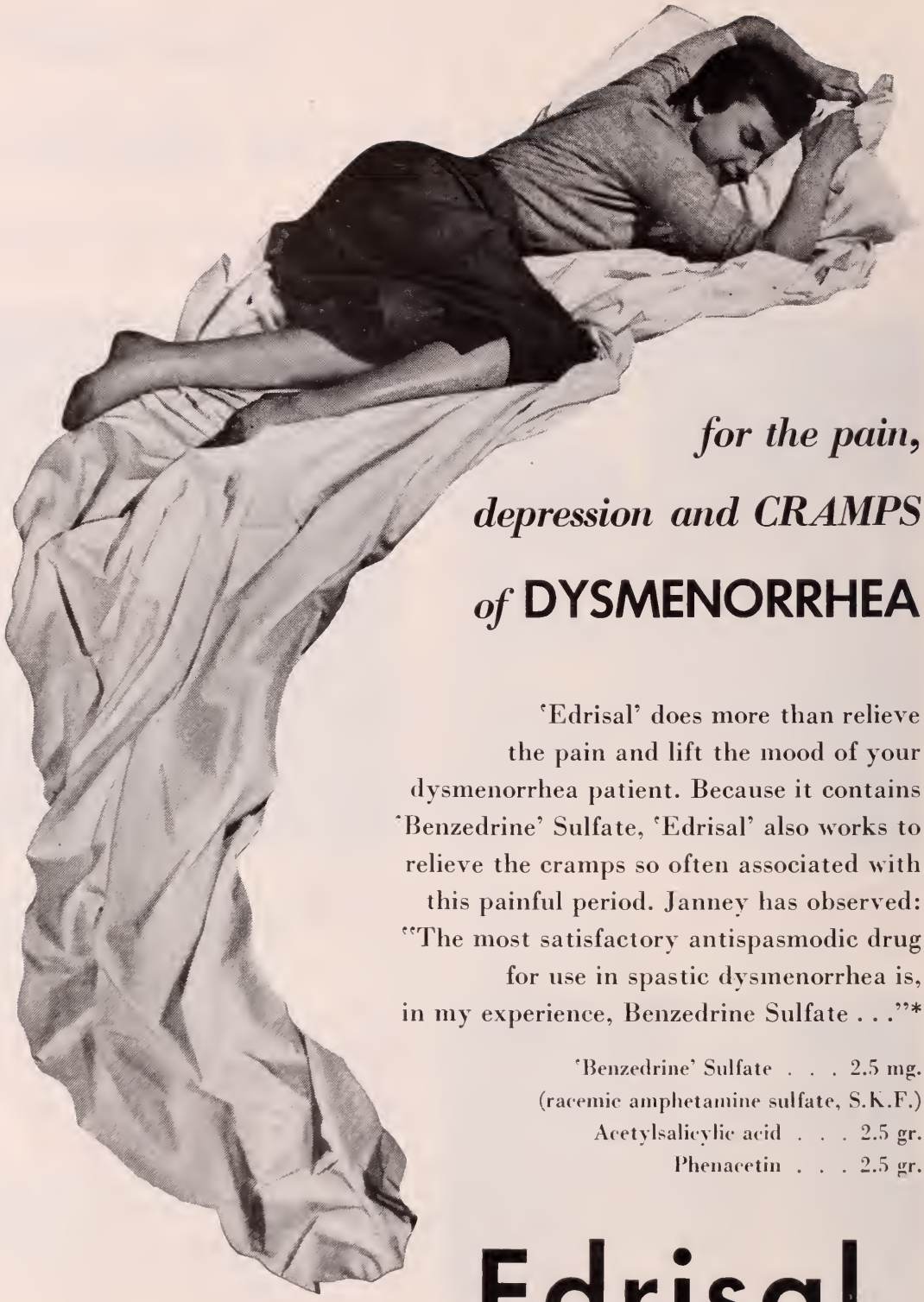
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for the pain,

depression and CRAMPS

of **DYSMENORRHEA**

'Edrisal' does more than relieve the pain and lift the mood of your dysmenorrhea patient. Because it contains 'Benzedrine' Sulfate, 'Edrisal' also works to relieve the cramps so often associated with this painful period. Janney has observed: "The most satisfactory antispasmodic drug for use in spastic dysmenorrhea is, in my experience, Benzedrine Sulfate . . ."*

'Benzedrine' Sulfate . . . 2.5 mg.
(racemic amphetamine sulfate, S.K.F.)
Acetylsalicylic acid . . . 2.5 gr.
Phenacetin . . . 2.5 gr.

Edrisal

Dosage: Two tablets, repeated every three hours, starting two days before menstruation. *Smith, Kline & French Laboratories • Philadelphia*

'Edrisal' and 'Benzedrine' T.M. Reg. U.S. Pat. Off.

*Janney, J.C.: Medical Gynecology, ed. 2, Philadelphia, W.B. Saunders, 1950, p. 365.

Great gift of sleep

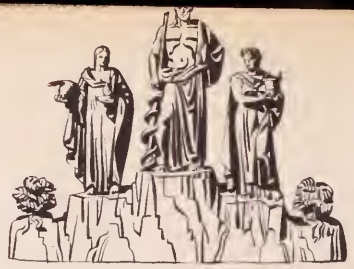


Insomnia, with mounting apprehension of tomorrow's dull fatigue, is unnecessary. The distress of sleeplessness is easily and safely calmed when appropriate dosages of 'Seconal Sodium' (Secobarbital Sodium, *Lilly*) are prescribed. Refreshing sleep quickly follows.

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Detailed information and literature on 'Seconal Sodium' (Secobarbital Sodium, Lilly) are personally supplied by your Lilly medical service representative or may be obtained by writing to Eli Lilly and Company, Indianapolis 6, Indiana, U.S.A.

Lilly



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Improvement

Crude as it now appears, the equipment which Colonel Eli Lilly devised for coating gelatin capsules seventy-five years ago was a decided improvement over earlier hand methods. Soon this machine which impaled pills on needle points was abandoned for a still better procedure which left the coatings intact. Again, another step forward was taken a few years later when Eli Lilly and Company started making the now well-known empty gelatin capsules. Better materials, faster machines, lower costs continue to result from current research in medicinal coatings at the Lilly Laboratories. This is just one more example of how American industry makes progress when it is encouraged by the rewards from improvement and is spurred by competition in a system of free enterprise.



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The
ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

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Vol. 99, No. 4 **April, 1951**

THE ANNUAL MEETING

The program for the 1951 Annual Meeting is published in this issue of the Illinois Medical Journal. The meeting this year will be held at the Hotel Sherman. The general assembly programs, individual section meetings, technical and scientific exhibits will all be presented on the mezzanine and the first floor of the hotel.

There will be the usual fine array of scientific exhibits under the supervision of Coye C. Mason, M. D., Director of Exhibits, which will be of interest to all physicians present at the meeting. Likewise, the technical exhibits have been carefully selected, and they will show what the many firms dealing in medical supplies of every type have done for the profession during the past year. The several medical book publishers will have their new books on display also.

The annual dinner, honoring the retiring president, and with past presidents as guests of the Society, will be the only function scheduled for Wednesday evening, May 23, and will be in the Grand Ball Room at the Sherman. An outstanding speaker has been procured for this occasion, and his will be the only speech scheduled for that evening.

There will be the usual number of meetings of allied groups which are found in the program data in this issue of the Journal. The alumni and fraternity luncheons, and also the annual luncheon meeting of the Fifty Year Club have likewise been arranged for the annual meeting. The Secretaries' Conference dinner meeting will be held on Tuesday evening and a fine program has been arranged.

There will be the usual two meetings of the House of Delegates, the first at 3:00 o'clock, Tuesday afternoon, May 22, and the second at 9:00 A.M., Thursday. There will be much business to come before the House and it is hoped that every component society will be represented this year.

Every member of this Society should endeavor, if possible, to attend the annual meeting, and those who have not previously arranged for suitable accommodations should write to the hotel at once in order that they may not be disappointed at the last moment.

YOU SHOULD PLAN TO BE AT THE ANNUAL MEETING.

THE SEAMY SIDE OF MEDICAL PUBLICITY

"Omelettes are not made without breaking eggs." Robespierre.

This is not the first time that I have discussed the fact that education of the laity in medical matters has drawbacks as well as advantages. The subject was recalled to my attention a few days ago in a sidewalk conversation with a married couple whom I meet from time

to time. I had never had any professional dealings with the wife, but I had heard that she was shopping around among the doctors, a performance by no means uncommon, especially in psychoneurotics. Incidentally, during the course of the conversation she observed that some of the medical publicity in the daily press, particularly the description of the early manifestations of cancer, gave her the jitters. She assumed that the medical profession was directly responsible, and suggested that it would be much more desirable if doctors merely stressed the importance of periodic physical check-ups.

Let us discuss her suggestion, which clearly presented a significant and perhaps fairly common point of view. In the first place the medical profession is not directly responsible for much of the medical information which appears in the public prints, even though most of it meets with their approval. It is well-known that a good many newspapers in the metropolitan centers employ writers specially trained in science who put out reports, usually about new medical discoveries, which, while occasionally premature, are in the main accurate and informative. In addition there are free-lance writers on medical subjects, some of whom stress their spectacular aspects and are not always as objective as they might be. Then there are the medical columnists of the daily press who probably do much more good than harm even though, like most of us, they have fads and foibles of their own. Finally, there are official health journals such as Hygeia and the pamphlets of the anticancer, antituberculosis and antiheart disease societies, that are wholly or partly controlled by representatives of the medical profession. It would be foolish to deny that the effect of the information purveyed by these various sources was not in the main salutary, at least in the case of well-balanced folks. On psychoneuroties that effect is different; they are apt when they read such medicated literature to imagine themselves suffering from all kinds of ailments. Even medical students are not immune, for it is recorded that Alonzo Clark, an eminent medical teacher in his day, prefaced his lectures on heart disease by requesting that the class limit the number of their members coming to him for examination for heart disease after his discussion.

There is merit in the suggestion that the medical profession should stress the importance of periodic examinations of the presumably healthy, which some leaders in medicine have been doing for years. If adults could be persuaded to have an annual overhaul on each birthday from infancy to senility it would be greatly to their advantage, even though evidence of serious illness would sometimes be missed. I have known several instances in which an individual was given a clean bill of health by a competent physician in the morning and dropped dead in the afternoon. The fact is that some very serious conditions are "silent" and that we do not yet know the early symptoms of some grave diseases. Then too, it has been my observation that the average practitioner is somewhat averse to examining presumably healthy people, though plenty of doctors do insurance examinations. There is also good evidence that a routine check-up may lead to more harm than good if evidence of questionable disease is found and its import is exaggerated by the physician or discussed with the patient in such a way as to cause unnecessary alarm. This is particularly true in neurotic patients.

It must be acknowledged then, that there is no good without its attendant evil, and the practical question in the medical education of the public is — shall we limit this instruction because of the effect that it may have on psychoneurotics? I think it may safely be assumed that the good which is accomplished will definitely outweigh the harm, particularly as the psychoneuroties will pretty surely seek medical counsel anyhow. We must continue to instruct the public in appropriate medical matters and urge the importance of periodic examinations, but our information must be couched in plain and simple language and free from any element of exaggeration or over-emphasis.—Guest Editorial George Blumer, M.D.

CURARE AND TETANUS

Mephenesin (3-ortho-tolxy-1, 2-propanediol), Tolserol® is proving to be a successful relaxing agent in the treatment of tetanus. This curare-like compound has been used in over a dozen cases with satisfactory control of muscular rigidity and spasm. Godman[1] administered tab-

1. Godman, H. E., Mephenesin as a Relaxing Agent in the Treatment of Tetanus. California Medicine 74:126, (Feb.) 1951.

lets containing 250 mg. of the drug to 12 patients with tetanus. Their ages ranged from 22 months to 68 years and each received phenobarbital for sedation in doses ranging from 30 to 130 mg. given from once to 3 times daily. Mephenesin was given in doses ranging from 62.5 to 750 mg. as often as every 2 hours in some cases and in others every 4 hours. One child and an elderly adult died. Another child failed to respond to the drug but survived the disease. The remainder had a most satisfactory response.

Godman was of the opinion that profound sedation is undesirable because it depresses respiration and makes it difficult to keep the airways free from secretion. Mephenesin is used only as an adjunct to tetanus anti-toxin. This product still is our most valuable weapon against this always dreadful disease, tetanus.

EARLY CANCER DETECTION

Many physicians have received the Cancer Verbal Screening Form for use on all patients 35 years of age or over. It has Council approval and should be an effective adjunct to the finding of early cancer. The card that is attached to the form has led to considerable discussion. It is to be detached and sent to the Illinois Department of Public Health, Bureau of Cancer and Heart Disease Control. This has aroused the suspicion of several physicians who are afraid that it will be used for government propaganda. This is not true, however, inasmuch as the name of the patient does not appear on the card and therefore the State has no opportunity to contact the patient relative to his cancer symptoms. It is meant to inform the Bureau that the physician has discovered a case of malignant neoplasm as a result of the Verbal Screening Form. In this respect it is not an expression of government activity.

During the past decade more and more people have become interes'ed in cancer. They believe that frequent examination is the answer to this perplexing problem. The Cancer Verbal Screening Form sets up the mechanism by which the patient will come to the physician as soon as the first suspicious sign is no'ed. The form has merit and should be made available to the laity.

SOCIETY TRANSACTIONS IN 1884

From about 1850 until the Illinois Medical Journal was established in 1899 the proceedings of the annual meetings of the Society were published in bound volumes. We have recently come into possession of the proceedings of the meeting held in Chicago May 20-21-22, 1884. It was a very interesting meeting. Among its other activities the House of Delegates elected 38 delegates to the American Medical Association. Dr. Henry Gradle read a paper entitled "Report on the Progress of Etiology." Under physical influences he cited a warning by Luecke (Centralblatt für Chirurgie, March 8, 1884) that the side strap stocking snpporter worn by children could be a cause of knock-knee. Gradle said, "The third class of disease causes, and by far the most important in frequency, viz., parasites, is one yet viewed with too much distrust. - - - - - The unrivalled work of Koch's on tuberculosis has been published in full during the past year." It is likely that this was the first paper dealing with the germ theory of disease ever presented before our Society.

For many years the Committee on Practical Medicine was a standing committee. It reported on developments of the year, sometimes presented brief case reports and favorite prescriptions or unusual experiences of members. For example, at the Urbana meeting in 1876 Dr. W. L. Goodell of Effingham made the following report in a case of congestive chill, where the patient, a young man, was snpposed to be dead by the friends. He administ'red "in one hour and fifteen minutes three tablespoonfuls of quinine, one teaspoonful of capsicum, two tablespoonfuls of black pepper, and one-half pint of whiskey. After which he sweat as never man sweat before. But his right arm and left leg remained icy cold for three days. He made a good recovery."

At the 1884 meeting Dr. E. Ingals introduced the following resolution, which was adopted.

"RESOLVED, That it is the sense of the Illinois State Medical Society that the best interests of the citizens of the Sta'e would be promoted by the passage of laws requiring that in future no person should be allowed to commence the practice of medicine, in any of its branches, in this State, who is not a graduate of a reputable medical college, and who shall not

have passed a satisfactory examination, as to qualifications, and been licensed by some Board to be designated for this purpose. We hereby instruct our Committee on Medical Legislation to try and secure the enactment of laws by our legislature, at its approaching session, that will accomplish this end."

The members of the Society were a serious high-minded lot of men and women who did remarkably well, considering the handicaps under which they labored.—HISTORY COMMITTEE

CHRONIC URTICARIA

Urticaria has a definite relationship to respiratory allergy, about one-third of the patients give a history of urticaria as an antecedent. In the treatment of chronic urticaria it is well to recognize that intrinsic allergies are chiefly responsible. Extrinsic factors should be considered, however, such as the constant use of drugs, like aspirin or barbiturates, catharties or the daily eating of large quantities of some such allergic food as wheat, milk or eggs. Where intrinsic factors are paramount in the chronic urticaria, every effort should be made to locate any chronic infection in any part of the body, or any other concealed pathologic condition. Just as in other chronic diseases, faulty nutrition, endocrine inbalance, heredity, fatigue, biological, emotional, environmental and other factors play an important role. When extrinsic and intrinsic factors can be excluded, physical allergy may play a role. *"Excerpt: Treatment of Acute Allergy Met in General Practice, Fred W. Wittich, M.D., Minneapolis, S. Dak. Journal of Med. and Phar., January 1951.*

ANTIHISTAMINICS FOR COLDS

Between January 19 and April 18, 1950, 1214 subjects were given one of four antihistaminic preparations as treatment for the common cold. These were, in the order in which they were dispensed; prophenpyridamine (Trimeton), pyranisamine maleate (Neoantergan), a placebo (lactose) and thonzylamine hydrochloride (Neohetramine). Information obtained by questionnaire was tabulated on International Business Machine cards and subjected to statistical analysis. We were unable to distinguish any effect of the three drugs, in the dosage used, on the common cold that differed significantly from the placebo. *Excerpt: The Antihistaminic Drugs in the Treatment of the Common Cold, A study conducted at Boston University, Francis C. Lowell, M.D.; Irving W. Schiller, M.D.; John E. Atman, M.A.; and Clifton F. Mountain, A.B., Boston, The New England J. M., Jan. 25, 1951.*

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chairman, John R. Wolff, Co-Chairman, Edwin F. Hirsch, Carroll Birch, Hubert L. Allen, Frederick W. Slobe, Edward W. Cannady, Ford K. Hick, W. Robert Maloney, Roland R. Cross, Alfred P. Bay, Frederic T. Jung.



The Practice of Pathology in a Hospital

Pathology has its roots in anatomy, chemistry, bacteriology, and physiology. A medical practice in these basic sciences is largely material and has little of sentiment which in clinical medicine is large. The comment is heard among pathologists that they do not receive adequate appreciation, esteem, or recognition for their work. Any of these characteristics implies a reciprocal response in material or sentimental tokens from hospitals, medical associates, and the patients for whom a pathologist renders a service. His ability and the quality of service rendered by the laboratory under his direction are the pathologist's tokens for exchange. Every practicing physician realizes how much the demand for laboratory examinations has increased in hospitals and in office practice, and some are acquainted also with the current need for more physicians trained in pathology to direct these laboratories.

Since the work relations of a pathologist in a hospital are with the administrator, the attending and resident members of the medical staff, and patients receiving care in a hospital, basis for discontent in tokens exchanged can be with any of these individuals or groups. When a pathologist accepts a hospital appointment he brings to that institution a specified quota of training and experience in pathologic anatomy and in clinical pathology. His personality, habits of work, tactfulness with lay and professional associates, integrity and many other qualities are important. A pathologist may seem difficult to approach, but such qualities are insignificant when he possesses excellent training, technic and experience which he offers in wise counsel to the hospital and to his medical associates in the diagnosis and treatment of their patients.

The practice of pathology has certain hazards, such as exposure to infections, which are more than in many other specialities of medicine. Infected surgical and autopsy tissue expose the pathologist to bacteria of the coccus groups, tuberculosis, typhoid and other organisms. Were he morbid about this or were he to become so from realizing in necropsies how slender and easily broken the thread of life may be, his mental attitude could become a large phobia. He must absorb these experiences and develop an equanimity which carries him through even those that have a terrific impact. The pathologist of a hospital is expected to perform necropsies with good technic. His method in thoroughness and care should command the respect of any doctor

viewing the examination, and he should demonstrate and discuss, at the time or later, the important lesions disclosed to the satisfaction of the clinician. These necropsy experiences contribute to the skill of the pathologist in his evalution of surgical tissues. Some hospitals require routine examinations of all tissues removed surgically by the attending staff. The reasons for this are many and the practice of this principle has advantages for the patient, the surgeon, and the hospital. Today, biopsies from many lesions are removed and are sent to the pathologist for diagnosis. Biopsy examinations are emphasized in all cancer control programs, and the bronchologist especially is dependent upon the results of biopsies in diagnosis and treatment. Accuracy in this work is highly important and any mistake in these tissue diagnoses looms large in the opinion of the physician for whose patient the pathologist renders this service. The patient bears the effects of such an error which may be serious. A prominent pathologist is said to have remarked that the mistakes allowable to a pathologist in his diagnostic interpretations must approach the vanishing point.

The multiplicity and range in variety of diagnostic problems confronting an active pathology service are endless. They include even the identification of structures foreign to the human body. A puzzled surgeon brought to a pathologist, small brown particles which his patient claimed were gallstones recovered from stools. The doctor's cholecystectomy accordingly was a fake and the fee expected in payment for the operation was not justified. The surgeon was astonished when the pathologist identified the particles as raspberry seeds. No pathologist has a mystic bowl out of which to read diagnoses; he depends upon good technic, observations, basic training and experience.

The pathologist organizes, staffs and administers the clinical and pathological laboratories and the blood bank of the hospital. He is expected to teach and to conduct conferences in pathology for the resident and attending staffs. The demand for these conferences reflects the educational importance that the staff places in these discussions, correlated with the clinical history of the patients. Demonstrations of tissues to small groups at conferences can be accomplished directly in suitable containers, but with large groups, a projection screen, opaque object and slide projectors are necessary. Printed and typewritten material and gross tissues also can be presented on a screen with these aids. Kodachrome transparencies of tissues have great value and with microprojection of histological preparations details of tissue structure can be shown to large groups. The responsibility for developing photography and these facilities is delegated to the pathologist. He needs to have imagination in applying these and other new technics in his work. Such activities and special studies in his field lead to projects of research, important in adding new information, but much more significant in developing clear thinking on the part of the pathologist. Thus, the work of a pathologist in a hospital as outlined covers a wide range of functions.

Difficulties designated as lack of appreciation, may arise between the pathologist and the groups with whom he functions, namely, the administrator of the hospital, his medical associates, and the patients for whom he makes examinations. The hospital administrator in consultation with the staff, usually arranges the salary or compensation for the hospital. Years ago, laboratories in hospitals were operated at a loss, but today practically all receive an income from patient services which exceeds the total expense of operation. The compensation which a pathologist receives from the hospital in which he works, that is, the materialistic token of appreciation, is determined with the hospital administrator on a salary, tenancy or percentage basis. Whatever the arrangement, the pathologist should receive compensation at the current level paid for such services, and for an opportunity to increase this compensation as his work and the laboratory under his direction develop. Pathologists in the past received small salaries and hospitals were slow to correct this practice. The laboratory operated under a modest fixed salary compensation for the pathologist can develop into a significant income-producing department of the hospital and the pathologist fretting under the strictures of a salary which he regards as small for his work, proposes: (1) that his salary be increased, (2) that he rent the laboratory space, operate the laboratory facilities as a business enterprise and take the profit; or (3) that he receive as compensation a considerable percentage of the gross income. In these discus-

sions, the pathologist may point out to the hospital director that under the rental or percentage arrangement, the hospital avoids the accusation of practicing medicine, or of profiting from the professional service of a salaried physician. An issue frequently not mentioned in these discussions is the possibility that the patient pays too much for the quality of laboratory services rendered. This may happen when charges are made for laboratory work at a professional rate and non-professional services are given. This occurs when little time is spent in a hospital by a pathologist and the examinations are made by technicians, and when a laboratory has an insufficient professional staff. The College of American Pathologists has offered the following gross income distribution for pathological laboratories in the midwest: 20 per cent for purposes of concession, 33 per cent for expenses including the salaries of non-professional personnel, 2 per cent for bookkeeping, and 5 per cent for collection losses. This leaves 40 per cent for payment of the professional personnel and excess of income over total expenses. Other sections differ slightly in this percentage distribution. Such a measure applied to laboratory finances may reveal startling disproportions, such as too small a salary or per cent paid the pathologist, or that patients are charged professional prices for non-professional services. Somewhere in these apparently conflicting positions is a fair and workable arrangement. In final analysis the patient pays the cost of his illness and complaints about excessive charges help the cause of socialized medicine.

Differences of opinion between a pathologist and a hospital administrator concerning space requirements for the laboratory are not as frequent now as formerly. The basement or another equally disadvantageous place was chosen because laboratories could be housed anywhere except near where they function best for the hospital. Space allotments today are more liberal because laboratory services are expanding and space for this increase is necessary. A hospital constructed without proper space location and allocation for laboratories gives the impression that trends in laboratory progress in medicine are disregarded, or that the hospital arbitrarily has determined the level of its medical practice. So-called "sharp practices" between pathologists and hospital administrators constitute a field for complaint. They should be settled amicably and the office of the College of American Pathologists and committees of various medical organizations are available to help clarify these difficulties. Perhaps hospital administrators and even physicians do not realize that the rapidly increased demand for trained pathologists exceeds the available supply, and that minor differences of opinion should be adjusted in order to maintain a needful hospital service.

The tokens of appreciation which the pathologist receives from his medical associates are largely, if not entirely, sentimental. The management of the laboratory in all of its phases and the pathologist's own work occasion comments of approval or disapproval. So long as clinicians practice medicine with pathologists there will be arguments and controversial discussions. Some of these become personal because of an unwillingness by the parties concerned to evaluate the evidence and its significance without pettiness and at the "adult" level. A pathologist should present his observations to the clinician and frankly discuss his interpretation. No one cares to have data forced upon him without understanding. A bit of humor or a kindly remark frequently dispels a tense situation. Because the pathologist works at a hospital with material from patients of that institution, members of the staff occasionally come to him for an opinion of sections of other material, a so-called "curb stone" consultation. Some of these may be serious discussions in which the clinician gives all of the pertinent data; others are initiated by the remark that the pathologist would be interested to see an unusual section and what did he think about it. "Peddling" for opinions among pathologists describes this practice. When the clinician has material sufficiently important to him and his patient to ask for an opinion, the pathologist would not feel unappreciated if this were sought at a diagnostic level with all of the requisites of a consultation and, where indicated, with the payment of a consultation fee. Another controversial subject is the relative monetary value of the pathologist's service in diagnosis as compared with the clinician's service to the patient. These discussions spiral into confusion and blindly disregard the main issue, namely, that each should be certain that he render service in value for the payment he expects.

Patients for whom services are rendered by a pathologist seldom know that he has participated in the diagnosis or treatment of their illnesses. The information he provides is channeled to the attending physician. Pathologists say that they should have the benefit of clinical contact with patients and certainly there are merits for this plea. No one but a pathologist knows, in the hurry of hospital practice, how little pertinent data is provided with tissues removed surgically and sent to him for examination. On occassion, the pathologist is requested to observe a lesion in an unanesthetized patient and to express an opinion. Certainly this is good practice and perhaps helps to acquaint the patient with the fact that the pathologist is more than a nebulous character. Probably pathologists, present or future, will actually see only a small fraction of the patients to whom they give professional service. Material tokens of appreciation from them will come to the pathologist largely through currency channels; those of a sentimental nature will be found in the esteem with which he is regarded in his community, and the satisfaction he gains in meeting, through the years of practice, the challenges of his speciality.

When by my solitary hearth I sit,
And hateful thoughts enwrap my soul with gloom,
When no fair dreams across my mind's eye flit,
And the bare heath of life presents no bloom,
Sweet hope, ethereal balm upon me shed,
And waft thy silver pinions o'er my head.

— John Keats —

E. W. H.

INTRAPANCREATIC OBSTRUCTION

With the clinical use of the determination of serum amylase for acute pancreatitis, it was hoped that more light would be thrown upon the many cases of obscure upper abdominal pain. Indeed, such information has been forthcoming, for the serum amylase level is often materially elevated and these significant elevations can only mean that large discharges of the ferment from the pancreas have found their way into the blood stream. Furthermore, the elevation is transient, and its return to normal may mean recovery or may indicate that complete necrosis of the gland has taken place. Also, its level in the blood has no prognostic value, and one has only to examine surgical records of operations in which the gland has been traumatized in any way to appreciate the levels attained by even relatively minor procedures. In the natural course of disease it has been found that the serum amylase remains within constant limits in practically all types of disease except in conditions in which the pancreas is damaged. It does, then, locate the disturbance in an organ that has hitherto received consideration usually by exclusion. It is reasonable that varying degrees of severity may occur in acute pancreatitis, and the determination of serum amylase enables one to recognize many more of these more mild episodes. *Excerpt: Intrapancreatic Obstruction, Charles W. Wainwright, M.D., Baltimore, The New England J. M., Feb. 1, 1951.*

CORRESPONDENCE



FIFTH ANNUAL MEETING OF THE ILLINOIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY

The fifth annual meeting of the Illinois Obstetrical and Gynecological Society will be held Monday, May 21, 1951, the day before the 1951 annual meeting of the Illinois State Medical Society opens at the Sherman. All physicians who are interested in this program are welcome to attend. The officers of the Society are:

C. Otis Smith, President, Oak Park
R. R. Loar, President-Elect, Bloomington
J. K. Hanson, Vice President, Moline
G. H. Edwards, Secretary, Pinckneyville
George B. Callahan, Treasurer, Waukegan

The meeting will be held in the Emerald Room of the Hotel Sherman and the following program has been prepared:

10:00 - 10:30 "Dysmenorrhea"
Armand J. Mauzey, Chicago

10:30 - 11:00 "Role of Sodium in Pregnancy"
Howard L. Penning, Springfield

11:00 - 12:00 "The Use and Misuse of Obstetrical Forceps"
Frederick H. Falls, Chicago

LUNCHEON

1:30 - 2:30 "Thrombophlebitis"

Conrad G. Collins, Guest Speaker, New Orleans, Louisiana
Professor and Chairman, Department of Obstetrics and Gynecology, Tulane University of Louisiana School of Medicine; Obstetrician and Gynecologist in Chief, Tulane Unit, Charity Hospital of Louisiana.

2:30 Presentation of Case Reports

THEORY AND TECHNIQUES OF AUTORADIOGRAPHY

A course in the theory and techniques of autoradiography will be held this summer by the Special Training Division of the Oak Ridge Institute of Nuclear Studies. George A. Boyd, who is well-known for his work in this field, will direct the course, which will begin on July 2 and continue for from three to four weeks.

Subjects to be covered in lectures and laboratory sessions will include:

a. Theory of the photographic process.

b. Reaction of ionizing particles with photographic emulsions and the interpretations of results.

c. Techniques of making gross and microscopic autoradiograms, including special histological procedures such as freeze-drying, carbowax embedding and smearing of cell suspensions on emulsion surfaces.

The course is intended for professional research workers who will direct research employing autoradiographic techniques. Applicants must have completed the basic radioisotope techniques course given by the Institute or possess equivalent experience in the use of radioisotopes in medical or biological research. Twenty individuals from the medical and biological sciences will be accepted for the course.

Registration for the course will be $25.00.

Additional information and application forms will be available at a later date from Ralph T. Overman, Chairman, Special Training Division, Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tennessee.

AMERICAN GOITER ASSOCIATION

Gentlemen:

We would appreciate it if you would announce in the section of your Journal devoted to future meetings the time and place of the 1951 meeting of the American Goiter Association. This meeting will be held in the Deshler-Wallick Hotel, Columbus, Ohio, May 24th, 25th and 26th, 1951.

The program for the three day meeting will consist of papers dealing with goiter and other diseases of the thyroid gland, dry clinics and demonstrations.

George C. Shivers, M. D.,
Corresponding Secretary.

CLINICS FOR CRIPPLED CHILDREN LISTED FOR MAY

Twenty-two clinics for Illinois' physically handicapped children have been scheduled for next month by the University of Illinois Division of Services for Crippled Children. The Division will conduct 17 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical social and nursing services. There will be 4 special clinics for children with rheumatic fever and 1 for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer or bring to a convenient clinic any child or children for whom he may want examination or may want to receive consultative services.

The May clinics are:

May 2—Joliet, Will Co. TB Sanitarium
May 2—Alton, Alton Memorial Hospital
May 3—Sterling, Sterling Public Hospital
May 3—Monticello, Lincoln School
May 8—Peoria, St. Francis Hospital
May 8—E. St. Louis, Christian Welfare
May 9—Hinsdale, Hinsdale Sanitarium
May 10—Springfield, St. John's Hospital
May 10—Elmhurst, (Rheumatic Fever), Memorial Hospital of DuPage County
May 10—DuQuoin, Marshall Browning Hospital
May 11—Chicago Heights (Rheumatic Fever), St. James Hospital
May 15—Quincy, St. Mary's Hospital
May 15—Casey, High School
May 16—Evergreen Park, Little Company of Mary
May 17—Rockford, St. Anthony's Hospital
May 17—Shawneetown, Burroughs-Stanelle Medical Center
May 22—Peoria, St. Francis Hospital
May 22—Effingham, (Rheumatic Fever), Douglas Township Bldg.
May 22—E. St. Louis, St. Mary's Hospital
May 23—Springfield (Cerebral Palsy), Memorial Hospital
May 24—Bloomington, St. Joseph's Hospital
May 25—Chicago Heights (Rheumatic Fever), St. James Hospital

"YOUR MENTAL HOSPITALS" VETERANS' REHABILITATION CENTERS

Facilities for the purpose of providing out-patient psychiatric treatment for veterans are available at Chicago, Rockford, Peoria and Champaign-Urbana. The largest unit which is in Chicago, conducts a full time clinic in the buildings that formerly housed the Washington Boulevard Hospital and its Nursing Home. The majority of the veterans treated are non-service connected nervous disorders who are not eligible for treatment from the Veterans' Administration. The patients are referred by physicians, other clinics, social agencies and the Veterans' Administration.

After study and diagnosis, the plan of treatment and the progress of each case is closely supervised by a psychiatrist. Treatment is conducted, by members of a team consisting of the psychiatrist, social worker and a psychologist. Closely integrated with the psycho-therapy are other therapeutic services such as, occupational and recreational therapies and physical education. These activities are directed by capable instructors, in specialized facilities and shops.

These adjunct therapies help to develop skills and interests that will strengthen his social relations and help him to relate constructively to other people. Frequent staff meetings are held to coordinate the work which the several therapists are doing with the individual patients. The vocational counsellor plays a major roll when patients are unemployed or employed in unsatisfactory or unsatisfying jobs. These adjunct therapies are given by prescription or order of the psychiatrist responsible for the patient.

The Chicago Center has a biochemical laboratory, an electrocardiograph, and an electroencephalograph. Within the program, there is an epileptic treatment unit, and an alcoholic treatment unit, both of which provide specialized psychiatric and medical care for these disorders. Group therapy, as well as individual therapy, is utilized is the alcoholic treatment program.

With respect to the volume of work, over three hundred patients receive treatment each month on an out-patient basis. Over seven hundred individual psycho-therapeutic sessions are scheduled each month, and there are nearly six hundred visits to the other treatment facilities.

There are about seventy to one hundred new applications for treatment monthly. Diagnostic work-ups entail at least one session with a psychiatrist, and, in most cases, interviews with social workers, psychological tests, biochemical studies, etc.

The Center endeavors to give an over-all community service, thus helping the efforts of many other social agencies. Emergency referrals, or patients who are acutely ill are seen without delay. In addition, the Center frequently returns patients to the referring agency with recommendations for treatment to be given by the referring agency. In other instances, the veteran is accepted for treatment, and close collaboration is then sustained with the referring agency which may be working on other problems in the family.

On two evenings a week, and on Saturday mornings, clinics are held to serve veterans who are employed and cannot attend the week day sessions. These evening and Saturday clinics are conducted by the regular professional staff, augmented by part-time psychiatrist, social workers and psychologist. Occupational and recreational therapies are available to patients five nights a week and on Saturdays.

Locations of Facilities

Chicago — 2449 West Washington Blvd.
Rockford — 330 Cutler Building, 305 South Main Street
Champaign-Urbana — 107½ South Neil Street, Champaign
Peoria — 1420 Knoxville Avenue

G. A. Wiltrakis, M.D.
Deputy Director

COURSE IN INTERNAL MEDICINE

The Michael Reese Hospital Postgraduate School will be offering a two-week course in "Recent Advances in Internal Medicine". This full-time, intensive course will meet from April 30th to May 12th, 1951. Clinical and didactic material pertaining to recent advances in diagnosis and therapy will be presented by members of the Department of Internal Medicine, other Clinical Departments and of the Division of Laboratories and Research. For further information, address: Dr. Samuel Soskin, Dean, 29th St. & Ellis Ave., Chicago 16, Illinois.

SUMMER CAMP FOR DIABETIC CHILDREN

"Holiday Home" at Lake Geneva, Wisconsin will be open to eighty diabetic children, ages 8 through 14, from June 25, to July 16, 1951. This camping period is sponsored by The Chicago Diabetic Association.

The need for such a camp in the mid-west was apparent in 1949 when "Holiday Home" provided the facilities to care for the younger diabetics and give them the advantage of summer camping. The contributions of such experience to the development of a normal child are obvious.

A schedule of the usual camping activities is maintained under supervision of a trained medical, dietary, nursing and counseling staff. Included are swimming, handicrafts, nature study, boating, tennis and other pursuits which encourage the child in the direction of a normal balanced life. Association with other diabetics in this program gives the camper a feeling of group security difficult to achieve in the home.

Detailed medical analysis of the 1950 camping season, general information and applications are available on request. All inquiries should be addressed to the Chicago Diabetes Association, Inc., 950 East 59th Street, Chicago 37, Illinois.

CHEST PHYSICIANS TO MEET IN ATLANTIC CITY

The seventeenth annual meeting of the American College Of Chest Physicians will be held at the Ambassador Hotel, Atlantic City, New Jersey, June 7 through 10, 1951. An interesting scientific program has been arranged for presentation at the meeting.

The Board of Examiners of the College has announced that the next oral and written examinations for Fellowship will be held in Atlantic City on June 7. Candidates who would like to take the examinations for Fellowship should contact the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The convocation ceremonies will be held at the Ambassador Hotel, Atlantic City on Saturday, June 9, at which time certificates will be awarded to new Fellows of the College.

Dr. Otto L. Bettag, Chicago, is Regent of the College for the district, Dr. Charles K. Petter, Waukegan, serves as Governor of the College for Illinois. Dr. Edwin R. Levine, Chicago is President of the Illinois Chapter of the College and Dr. William J. Bryan, Rockford, serves as Secretary.

PSYCHIATRY IN A GENERAL HOSPITAL

At the present time it is possible that the physical difficulties are a greater obstacle than prejudice against psychiatry because just now there actually is no space, money, personnel or equipment available for psychiatric use and no immediate prospect of getting any. Every square foot of hospital floor space is needed for some special purpose. Every man-hour of available energy, trained or untrained, is allotted to some particular job, and even today the number of patients with severe disorders appears to be increasing as the cost of living rises. But it is also generally believed by those who are interested in this subject that, whereas the present is not a good time to try to expand psychiatry, it is nevertheless a good time to try not to lose whatever progress has been made in the past. *Excerpt: The Need for Psychiatry in a Municipal General Hospital, Merrill Moore, M.D., Boston, The New England J. M., Jan. 25, 1951.*

Program

OF THE

One Hundred Eleventh

ILLINOIS STATE MEDICAL SOCIETY ANNUAL MEETING

Hotel Sherman
CHICAGO, ILLINOIS
May 22, 23, 24, 1951

PROGRAM SUMMARY

On the Opening Day

TUESDAY, MAY 22, 1951

In the Morning:
General Assembly in the Grand Ballroom
President's Address
Oration in Surgery

At Noon:
Diplomates, National Board of Medical Examiners
Luncheon in Club Room No. 9

In the Afternoon:
General Assembly in the Grand Ballroom
First Meeting of the House of Delegates
Louis XVI Room — 3:00 p.m.

And in the Evening:
Secretaries' Conference — Open to all physicians
Dinner meeting — 6:30 p.m. Crystal Room
Annual Hospitality Hour, for all registrants and exhibitors — 9:00 p.m. Louis XVI Room

On the Second Day

Wednesday, May 23, 1951

In The Morning:
Women Physicians' Breakfast
Jade Room
Section on Eye, Ear, Nose and Throat
Louis XVI Room
Illinois Chapter, American College of Chest Physicians
Primrose Room
Section on Pathology
Club Room 5
Physicians' Association, Department of Public Welfare
Emerald Room
Section on Pediatrics
Grey Room

At Noon:
University of Illinois Alumni Luncheon
Crystal Room
Loyola University Alumni Luncheon
Jade Room
Illinois Chapter, American Academy of Pediatrics
Grey Room
CAA Examiners Luncheon — Club Room 8

In the Afternoon:
Section on Eye, Ear, Nose and Throat
Louis XVI Room
Section on Preventive Medicine and Public Health
Primrose Room
Section on Radiology
Club Room 5
Sections on Pediatrics & Obstetrics and Gynecology
Grey Room

And in the Evening:
The Annual Dinner honoring the retiring President, Harry M. Hedge, Chicago — The Grand Ballroom

On the Third Day

Thursday, May 24, 1951

In the Morning:
General Assembly in the Grand Ballroom
Second Meeting of the House of Delegates
Louis XVI Room

At Noon:
Fifty Year Club Luncheon
Crystal Room
Phi Chi Fraternity Luncheon
Primrose Room

In the Afternoon:
General Assembly in the Grand Ballroom

HOUSE OF DELEGATES

FIRST MEETING OF THE HOUSE OF DELEGATES

Tuesday Afternoon, May 22, 1951
Louis XVI Room

3:00 P.M. The First Meeting of the House of Delegates will be called to order by the President for:
Reports of Officers, Councilors, Committees;
Appointment of Reference Committees;
Introduction of Resolutions;
and for the transaction of other business which may come before the House.

THE COMMITTEE ON CREDENTIALS will meet in the Secretary's Office, Club Room 1, on the first floor of the Hotel Sherman, at 10:00 o'clock Tuesday morning, May 22, 1951. At 2:00 o'clock in the afternoon, this Committee will meet in the Louis XVI Room. Delegates desiring to be certified as the official representatives of their county medical societies must present Credential Cards to this Committee as soon as possible so that the First Meeting of the House can be under way at 3:00 o'clock.

Present your credentials during the day so that there will be no delay just prior to the opening of the first session of the House.

SECOND MEETING OF THE HOUSE OF DELEGATES

Thursday Morning, May 24, 1951
Louis XVI Room

9:00 a.m.

The Second Meeting of the House of Delegates will be called to order by the President for:
The Election of Officers, Councilors, Committees, Delegates and Alternates to the American Medical Association;
Reports of Reference Committees and action on same;
Action on Resolutions;
and for the transaction of other business to come before the House.

At the close of this meeting, C. Paul White of Kewanee will be installed as the new President of the Illinois State Medical Society. He will receive the official gavel from the retiring President, Harry M. Hedge of Chicago.

GENERAL ASSEMBLIES

CONSTITUTION AND BY-LAWS
Illinois State Medical Society

CHAPTER XIII.

Section 3. "All papers read before the Society or any Section thereof, shall become the property of the Society. Each paper shall be deposited with the Secretary when read, and presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already been published."

Tuesday Morning, May 22, 1951

Ballroom

Presiding: Anders J. Weigen, Chicago
Assisting: Howard R. Miller, Peoria

9:00-9:10 Opening of the 1951 Annual Meeting — Harry M. Hedge, President, Chicago

9:10-9:30 "Diagnosis and Management of Congenital Heart Disease"
Stanley Gibson, Chicago
Emeritus Professor of Pediatrics, Northwestern University Medical School; Chief Cardiologist, Children's Memorial Hospital

9:30-9:50 "Surgical Aspects of Congenital Heart Disease"
Willis J. Potts, Chicago
Chief of Surgery, Children's Memorial Hospital

9:50-10:20 RECESS for viewing scientific and technical exhibits

Presiding: George P. Guibor, Chicago
Assisting: William A. McNichols, Dixon

10:20-10:50 "The Practicing Physician and Public Health"
Walter L. Bierring, Des Moines, Iowa
Emeritus Professor of Medicine, State University of Iowa; State Commissioner of Health of Iowa; Past President of the American Medical Association.

10:50-11:20 PRESIDENT'S ADDRESS: "Faith"
Harry M. Hedge, Chicago
President, Illinois State Medical Society

11:20-12:05 ORATION IN SURGERY: "Operation for Coronary Artery Disease"
Claude S. Beck, Cleveland, Ohio
Professor of Neurosurgery, Western Reserve University School of Medicine

Tuesday Afternoon, May 22, 1951

Ballroom

Presiding: Armand J. Mauzey, Chicago
Assisting: H. Kenneth Scatliff, Chicago

1:30-2:00 "Complications of the Puerperium"
Conrad Green Collins, New Orleans, Louisiana
Professor and Chairman of Department of Obstetrics and Gynecology, Tulane University of Louisiana School of Medicine; Obstetrician and Gynecologist in Chief, Tulane Unit, Charity Hospital of Louisiana

2:00-2:20 "Medical Aspects of Nuclear Energy"
Robert V. Atz, Decatur
Formerly Instructor at the Chemical Corps School of the United States Army at Edgewood, Maryland.

2:20-2:50 "Infant Feeding With and Without Added Carbohydrates"
Lloyd E. Harris, Rochester, Minnesota
Rochester Child Health Institute. Consultant, Section on Pediatrics, The Mayo Clinic

2:50-3:20 RECESS for viewing scientific and technical exhibits

Presiding: Charles D. Branch, Peoria
Assisting: Coye C. Mason, Chicago

3:20-3:40 "Surgical Lesions of the Esophagus"
Charles B. Puestow, Chicago
Clinical Professor of Surgery, University of Illinois College of Medicine.

3:40-4:10 "A Discriminative Selection of Laboratory Studies in the Diagnosis of Disease"
Frank W. Konzelmann, Washington, D. C.
Director of Laboratories Central Dispensary and Emergency Hospital.

4:10-4:30 "Management and Outlook of Coronary Disease"
Robert S. Berghoff, Chicago
Clinical Professor of Medicine, Stritch School of Medicine, Loyola University; Senior Attending Physician and Senior Cardiologist, Mercy Hospital.

4:30-4:50 "Examination and Interpretation of Knee Injuries"
James J. Callahan, Chicago
Professor and Chairman of the Department of Bone and Joint Surgery, Stritch School of Medicine, Loyola University
James E. Segraves, Chicago
Associate Attending Surgeon, St. Anne's Hospital

Thursday Morning, May 24, 1951

Ballroom

Presiding: Richard C. Gamble, Chicago
Assisting: Felix A. Tornabene, Aurora

9:00-9:20 "Further Observations on the Treatment of Bulbar Poliomyelitis as a Problem in Respiratory Obstruction"
Martin H. Seifert, Chicago
Associate in Medicine, Northwestern University Medical School; Chief of Section on Chest and Infectious Medicine, Evanston Hospital
Thomas Galloway, Chicago
Professor of Otolaryngology, Northwestern University Medical School; Attending Otolaryngologist, Evanston Hospital

9:20-9:50 "Fundus Changes Seen in Hypertension"
Harold G. Scheie, Philadelphia, Pennsylvania
Assistant Professor of Ophthalmology, University of Pennsylvania School of Medicine

9:50-10:10 "Diagnosis and Treatment of Meningitis"
Archibald L. Hoyne, Chicago
Emeritus Professor of Pediatrics, University of Illinois College of Medicine; Professor of Pediatrics, Chicago Medical School.

THURSDAY (Continued)

10:10-10:40 RECESS to view scientific and technical exhibits

Presiding: R. F. Millet, Macomb
Assisting: Paul F. Fox, Chicago

10:40-11:10 "Evaluation of Antibiotic Therapy"
Chester S. Keefer, Boston, Massachusetts
Wade Professor of Medicine, Boston University School of Medicine; Physician in Chief, Massachusetts Memorial Hospital, and Director of Evans Memorial and Massachusetts Memorial Hospitals

11:10-11:30 "Bronchoscopic Problems in the Newborn"
Paul H. Holinger, Chicago
Professor of Bronchoesophagology, University of Illinois College of Medicine
Kenneth Johnston, Chicago
Clinical Associate (Bronchoesophagology) University of Illinois College of Medicine

11:30-12:00 "Surgical Lesions of the Stomach"
James T. Priestley, Rochester, Minnesota
Professor of Surgery, University of Minnesota Medical School; Professor of Surgery, The Mayo Foundation, University of Minnesota

Thursday Afternoon, May 24, 1951

Ballroom

Presiding: Eugene L. Walsh, Chicago
Assisting: Willard C. Smullen, Decatur

1:30-1:50 "Common Complaints in Obstetrics and Gynecology"
W. C. Scrivner, East St. Louis
Instructor, Department of Obstetrics and Gynecology, Washington University School of Medicine, St. Louis

1:50-2:35 ORATION IN MEDICINE: "Coronary Artery Disease"
William D. Stroud, Philadelphia, Pennsylvania
Professor of Cardiology, University of Pennsylvania Graduate School of Medicine; Consulting Cardiologist to the Graduate, Pennsylvania, Bryn Mawr, Abington Memorial Children's Heart, St. Christopher's and Montgomery Hospitals

2:35-3:05 RECESS to view scientific and technical exhibits

Presiding: Granville A. Bennett, Chicago
Assisting: T. J. Wachowski, Wheaton

3:05-3:25 "The Use of Laboratory Procedures in Following Therapy with Cortisone and ACTH"
Rachmiel Levine, Chicago
Director, Department of Metabolic and Endocrine Research and Attending Physician, Michael Reese Hospital; Professorial Lecturer in Physiology, University of Chicago

3:25-3:55 "Uses of Radio Iodine in Medicine"
Earl R. Miller, San Francisco, California
Professor of Radiology, University of California Medical School

3:55-4:15 "Comments on The Adrenal Cortex in Systemic Disease"
Allan T. Kenyon, Chicago
Professor of Medicine, University of Chicago School of Medicine

4:15-4:35 "Trends in Varicose Vein Surgery"
Richard E. Heller, Chicago
Associate in Division of Surgery, Northwestern University Medical School; Consulting Surgeon, Hines Hospital; Attending Surgeon, Chicago Memorial Hospital

SECTION MEETINGS

Section on Eye, Ear, Nose and Throat

WEDNESDAY MORNING, MAY 23, 1951

Louis XVI Room

William A. McNichols, Dixon ..... Chairman
George P. Guibor, Chicago ..... Secretary

9:00-9:20 "Present Day Management of Deafness"
George E. Shambaugh, Jr., Chicago

9:20-9:40 "Traumatic Injuries of the Cornea"
J. A. Johnson, Mt. Vernon

9:40-10:00 "Management of Choanal Polyps"
Arthur Loewy, Chicago
Irving Sokolsky, Chicago

10:00 — "Wound Closure Following Cataract Surgery"
Harold G. Scheie, Guest of Honor, Philadelphia, Pa.

11:00 Business Meeting

11:20 — RECESS to view scientific and technical exhibits

Wednesday Afternoon, May 23, 1951

2:00-2:20 "Eye Infections and Injuries in Chemical and Atomic Warfare"
Roland I. Pritikin, Rockford

2:20-2:40 "Problems in Reconstructive Surgery of the Nose"
John Nicholson, Chicago

2:40-3:00 "Five Year Survey of Nasopharyngeal Tumors"
Irwin D. Horwitz, Chicago

3:00-3:20 "Indications for Keratectomy"
Richard Perritt, Chicago

3:20-3:40 "Dental Foreign Bodies of the Lung and Esophagus"
Elmer Hagens, Chicago

3:40-4:00 "Indications and Technique of Using Replacement Grafts for Loss of Nasal Tip"
Oscar Becker, Chicago

4:00-4:20 "Treatment of Anterior Laryngeal Stenosis by Tantalum Plate Implant"
Albert H. Andrews, Jr., Chicago
Marvin J. Tamari, Chicago

4:20-4:40 "Rose Thorn Penetrating the Cornea and Anterior Chamber"
E. A. Pushkin, Chicago
Thomas D. Allen, Chicago

4:40-5:00 "Practical Details in the Removal of Foreign Bodies from the Eye" Statistical Report
Louis Rampona, Chicago

5:00-5:20 "A Report on the Visual Screening Program in Oak Park Schools"
Palmer Good, Oak Park

Section of Pediatrics

WEDNESDAY MORNING, MAY 23, 1951

Grey Room

Anders J. Weigen, Chicago ..... Chairman
Howard R. Miller, Peoria ..... Secretary

9:00-9:20 "A Resume of the Proprietary Infant Foods"
Herman F. Meyer, Chicago
Associate Professor of Pediatrics, Northwestern University Medical School

9:20-9:40 "Articular Disease in Childhood"
J. B. Richmond, Chicago
Professor of Pediatrics, University of Illinois College of Medicine

9:40-10:00 "The Celiac Syndrome"
John A. Bigler, Chicago
Professor and Head of the Department of Pediatrics, Northwestern University Medical School

10:00-10:20 "Muscular Weakness in Children"
Douglas Buchanan, Chicago
Associate Professor, University of Chicago, Attending Neurologist, Children's Memorial Hospital

Illinois Chapter
American Academy of Pediatrics Luncheon

WEDNESDAY NOON, MAY 23, 1951

Grey Room

The annual luncheon of the Illinois Chapter of the American Academy of Pediatrics will be held Wednesday noon, May 23, 1951 at the Hotel Sherman in the Grey Room at 12:00 noon.

All physicians who are interested in pediatrics are cordially invited to attend.

John L. Reichert, President
Gerald M. Cline, Vice-President
Samuel J. Hoffman, Secretary
Harry L. Faulkner, Treasurer

Joint Session of the Section of Obstetrics and Gynecology and the Section on Pediatrics

WEDNESDAY AFTERNOON, MAY 23, 1951

Grey Room

Obstetrics and Gynecology:
Worling R. Young, Geneseo ..... Chairman
Armand J. Mauzey, Chicago ..... Secretary
Pediatrics:
Anders J. Weigen, Chicago ..... Chairman
Howard R. Miller, Peoria ..... Secretary

2:00-2:30 "Natural Childbirth by Relaxation" — A Report of 169 Cases:
Harold W Miller, Chicago

3:00-3:30 "A Report of Experience in 'Rooming In' of Mother and Baby in the Hospital"
John C. Montgomery, Detroit, Michigan

Section on Pathology

WEDNESDAY MORNING, MAY 23, 1951

Club Room No. 5

Granville A. Bennett, Chicago ..... Chairman
Coye C. Mason, Aurora ..... Secretary

9:00-9:20 "Myocardial Infarction"
William Wartman, Chicago
Morrison Professor of Pathology, Northwestern University Medical School
Discussion: 9:20-9:30

9:30-9:50 "Indeterminate Pulmonary Lesions"
William E. Adams, Chicago
Professor of Surgery, University of Chicago School of Medicine
Discussion: 9:50-10:00

10:00-10:20 "Responsibility of the Hospital Pathologist"
Edwin F. Hirsch, Chicago
Associate Professor of Pathology, University of Chicago School of Medicine;
Discussion: 10:20-10:30

10:30-10:50 "Tumors of the Parotid Gland"
George Milles, Chicago
Associate Professor of Pathology, University of Illinois College of Medicine.
Discussion: 10:50-11:00

11:00-11:45 "A Critique of the Conduct of the Clinical Laboratory"
Frank W. Konzelmann, Washington, D. C.
Central Dispensary and Emergency Hospital

Section on Preventive Medicine and Public Health

WEDNESDAY AFTERNOON, MAY 23, 1951

Primrose Room

Dale E. Scholz, Chicago ..... Chairman
Felix A. Tornabene, Aurora ..... Secretary

Public Health (Continued)

1:30-1:50 "Tuberculosis and its Relation to the Practicing Physician"
E. A. Piszczek, Chicago
Controller, Suburban Cook County Tuberculosis Sanatorium District

1:50-2:10 "Treatment of Adult Syphilis"
Jack Rodriquez, Chicago
Medical Director, Chicago Intensive Treatment Center.

2:10-2:30 "Practical Office Syphilology"
Leonard M. Schuman, Springfield
Deputy Director of Division of Preventive Medicine, State Department of Public Health

2:30-2:50 "Diagnosis and Management of Prenatal and Congenital Syphilis"
Hans C. S. Aron, Chicago
Consultant to the Chicago Intensive Treatment Center

2:50-3:30 "Wet Clinic"
Clinical Presentation of Venereal Disease Patients with Active Lesions.

Section on Radiology

WEDNESDAY AFTERNOON, MAY 23, 1951

Club Room No. 5

Theodore J. Wachowski, Wheaton ..... Chairman
Willard C. Smullen, Decatur ..... Secretary

3:30 p.m. The Section on Radiology will have a Film Reading Session at which the out-of-state guest, Earl R. Miller, of San Francisco, California, will act as moderator. Doctor Miller is Professor of Radiology, at the University of California Medical School, Berkeley, and San Francisco.

OTHER SCIENTIFIC PROGRAMS

ILLINOIS CHAPTER

American College of Chest Physicians

WEDNESDAY MORNING, MAY 23, 1951

Primrose Room

Edwin R. Levine, President
Charles K. Petter, Vice President
William J. Bryan, Secretary
Abel Froman, Chairman — Program Committee

9:00 a.m.

"Recent Advances in the Treatment of Bronchial Asthma with Special Reference to the Use of ACTH and Cortisone"
Maurice S. Segal, Boston, Massachusetts
Director of the Department of Inhalational Therapy, Boston City Hospital

"Some of the Problems in the Diagnosis of Congenital Malformation of the Heart"
Benjamin Gasul, Chicago
Director, Pediatric Cardiology, Cook County Children's Hospital, and Hektoen Institute

"The Treatment of Bilateral Bronchiectasis"
Darrell H. Trumpe, Springfield
Medical Director, St. John's Sanitarium

"Immunological Considerations in Tuberculosis with Special Reference to Vaccination"
Jay Arthur Myers, Minneapolis, Minnesota
Professor of Medicine and Public Health, Medical and Graduate School of the University of Minnesota

"The Use of the Chest X-ray in Picking up a Masquerading Lung and Heart Condition"
Abel Froman, Chicago
Tuberculosis Consultant, Manteno State Hospital

Physicians' Association

Department of Public Welfare

WEDNESDAY MORNING, MAY 23, 1951

Emerald Room

9:00 a.m.

"Prolonged Post-Eclamptic Aphasia"
Heinz Goldschmidt, Peoria
Peoria State Hospital
Marianne L. Simmel, Ph.D., Chicago
Illinois Neuropsychiatric Institute

"An Intensive Case Study of a Schizophrenic"
Patricia Jordan, Elgin
Elgin State Hospital

"Psychosurgery in a State Hospital"
Isadore Spinka, Chicago
Milton Tinsley, Chicago
George Fenyes, Chicago
Chicago State Hospital

"Current Status of Shock Therapy in the State Hospital"
Alan A. Lieberman, Elgin
Elgin State Hospital

"Hermaphroditism"
Leon Beilin, Manteno
Manteno State Hospital

SOCIAL FUNCTIONS DURING THE MEETING

Diplomates of the National Board of Medical Examiners

Tuesday noon, May 22, 1951
Club Room No. 9 — Sherman Hotel

The annual meeting of the Illinois Diplomates of the National Board of Medical Examiners will be held at the Hotel Sherman, Club Room No. 9, at 12:00 noon, Tuesday, May 22, 1951.

All Diplomates are welcome to attend this luncheon arranged by Dr. Willard O. Thompson of Chicago.

The meeting will be devoted to an informal discussion of the problems of the National Board in general, and of the State of Illinois in particular.

Secretaries Conference Dinner

Tuesday Evening, May 22, 1951

Crystal Room

Max Hirschfelder, Chairman ..... Centralia
Paul S. Baur, Vice-Chairman ..... Cairo
Walter C. Bornemeier, Secretary ..... Chicago

THIS MEETING IS OPEN TO ALL PHYSICIANS WHO DESIRE TO ATTEND

6:30 p.m. The program for the Tuesday evening dinner meeting has been developed for all members of the Society who desire to attend. Physicians and their wives are welcome. Tickets are on sale at the ticket desk.

PROGRAM

"Medical Men and their Citizenship Responsibility"
C. Paul White, President-Elect, Illinois State Medical Society
Kewanee

"Medical Men and their Military Responsibility"
Carl F. Steinhoff, Chairman, Advisory Committee On Military Affairs, Illinois State Medical Society, Chicago.

Following the presentation of these papers, Doctor Steinhoff will conduct a "Question and Answer" program.

The Fellowship Hour

Tuesday evening, May 22, 1951

Louis XVI Room

9:00 p.m.

Under the auspices of the local Reception Committee, the Illinois State Medical Society will act as host to the physicians, their wives, and the technical exhibitors at the 1951 Annual Meeting. The annual "beer and pretzel" party is scheduled for 9:00 p.m. Tuesday evening, May 22, the opening night of the annual session.

The technical exhibitors will be invited to join the physicians and the local men will be delegated the responsibility of extending the invitation of the Society to the commercial houses to join in making this an evening of fun.

The Fellowship Hour is under the supervision of F. M. Nicholson and Albert Mickow. They promise us strolling players, plenty of beer and pretzels and perhaps a surprise or two.

The Society is your host for the evening. Come and get acquainted.

Women Physicians' Breakfast

Wednesday Morning, May 23, 1951

Jade Room

8:00 a.m.

On Wednesday morning the women physicians registered at the 1951 annual meeting will be the guests of the State Society at a breakfast meeting.

Dr. Marie Ortmayer will act as the chairman of the meeting this year.

Places will be reserved for 60 physicians, and complimentary tickets will be held at the ticket desk for women physicians who register.

Pick up your ticket early to be assured of a place at the breakfast program. Tickets may be secured at a table near the registration desk.

The speaker at the breakfast meeting will be Helen Heinen, M.D., of Chicago. Her subject will be "Good Health and Security for Today's Children".

During the three days of the meeting the Illinois State Medical Society and Branch No. 2 of the American Medical Women's Association will welcome to a special assigned room, all women physicians attending the 1951 annual meeting. Watch the bulletin board announcements for this room number.

Marie Ortmayer, Chicago, is in charge of this meeting, and she and her committee will act as hostesses in the Hospitality Room and at the Breakfast Meeting.

University of Illinois Alumni Luncheon

WEDNESDAY NOON, MAY 23, 1951

Crystal Room

The Medical Alumni Association of the University of Illinois College of Medicine will hold its annual meeting at a luncheon at the Hotel Sherman, in the Crystal Room, Chicago, on Wednesday, May 23, 1951 at 12:00 noon.

Please mail your reservations to Dr. Michael Streicher, 1853 West Polk Street, Chicago. Cost per plate is $3.50.

Your wife and guests will be welcome.

Class reunions are being organized for the classes of 1896, 1901, 1906, 1911, 1916, 1921, 1926, 1931, 1936, 1941.

Loyola University Alumni Luncheon

WEDNESDAY NOON, MAY 23, 1951

Jade Room

The alumni of the Stritch School of Medicine of Loyola University will have their annual luncheon reunion during the Illinois State Medical Society meeting, on Wednesday noon, May 23. The luncheon will be served at 12 noon.

The honored guests at the luncheon will be Dean John Sheehan and Dr. Thesle T. Job, now in his thirty-second year on the faculty.

Rev. G. G. Grant, S.J., executive secretary of the Alumni Association, has made the arrangements and will be in charge of the meeting.

Civil Aeronautics Association — Medical Examiners Luncheon

WEDNESDAY NOON, MAY 23, 1951

Club Room 8

For the first time, the Civil Aeronautics Administration Medical Examiners throughout Illinois will have a luncheon together during our annual meeting.

Dr. A. J. Herbolsheimer, Regional Medical Officer with offices at O'Hare Field, Chicago International Airport, Park Ridge, will be in charge of the affair, and is anxious to greet all medical examiners interested in getting together for the luncheon.

Dr. F. M. Meixner of Peoria is interested in this luncheon, and is assisting in the plans.

Tickets will be on sale, and all who desire to attend will be most welcome.

The Annual Dinner

WEDNESDAY EVENING, MAY 23, 1951

The Grand Ballroom

7:00 o'clock

PROGRAM:

Walter Stevenson, Quincy . . . . . **Toastmaster**
Immediate Past President

Invocation . . . . . **Rev. Clifford Newbain,**
Pastor, Covenant Methodist Church, Evanston

DINNER

ADDRESS: "Our American Heritage" Donald J. Cowling, President Emeritus,
Carlton College Northfield, Minnesota

Introduction of Past Presidents and Guests

Presentation of President's Certificate to
Harry M. Hedge
by Charles P. Blair, Chairman of the Council

Dinner Music . . . . . **The Irving Margraff Ensemble**

Fifty Year Club Luncheon

Thursday Noon, May 24, 1951

Crystal Room

Dr. Andy Hall, Chairman of the Fifty Year Club since its founding in 1937, will preside at the annual complimentary luncheon again this year. All physicians who have been in the practice of medicine for fifty years or more, will be the guests of the Illinois State Medical Society at their annual "get-together". This luncheon is one of the most popular social affairs taking place during the annual sessions of the State Society.

All members of the Fifty Year Club are invited to attend. Tickets for the luncheon may be secured at the ticket table.

Phi Chi Fraternity Luncheon

Thursday Noon, May 24, 1951

Primrose Room

The Phi Chi Alumni will have a luncheon meeting on Thursday noon, May 24.

This luncheon is sponsored by the Loyola University Chapter, and plans have been made by Dr. Arkell M. Vaughn, Chicago, with cooperation from Dr. Jacob E. Reisch of Springfield.

All members of the fraternity are welcome to attend.

Tickets

FOR ALL LUNCHEONS AND DINNERS WILL BE SOLD AT THE REGISTRATION DESK

SCIENTIFIC EXHIBITS

Mezzanine Level

Coye C. Mason, Chairman and Director .... Chicago
Hugh A. Flack, Chicago
Arkell M. Vaughn, Chicago
Lawrence W. Peterson, Chicago
Dwight E. Clark, Chicago
Leo M. Zimmerman, Chicago

Booth 1

Title: "The Surgical Management of Large Goiters"
Exhibitor: Robert W. Bartlett, St. Louis, Missouri
Institution: Washington University School of Medicine

Description: The exhibit consists of pre and post-operative photographs of patients and removed specimens, photographs of x-rays showing the marked tracheal distortion that occurs with certain large goiters, artist's drawings (P. A. Conrath) detailing the technique of the operation providing the maximum exposure for removal of such growths with safety. Printed text describes certain technical points of the operation and the type of anesthesia required.

Booth 2

Title: "Treatment of Inguinal Hernia in Infancy"
Exhibitors: James Graham, A. R. Eveloff, Springfield, Illinois
Institution: The Springfield Clinic

Description: Recommended surgical correction of congenital inguinal hernias as soon as the diagnosis is established. Surgical cure is dependent entirely on removal of the sac and not on reconstruction of the muscular and fascial structures composing the canal. Infantile hernias differ from adult hernias in this respect. Removal of the sac is readily accomplished in the newborn so there is no advantage in postponing surgery. The varieties of congenital hernias are illustrated with wax models and drawings.

Booth 3

Title: "Surgical Lesions of the Esophagus"
Exhibitors: Charles B. Puestow, George A. Olander, James H. Cross, Chicago
Institution: Veterans Administration Hospital

Description: This exhibit will illustrate the surgical lesions of the esophagus and emphasize the diagnostic features of these lesions, particularly carcinoma of the esophagus. Pre- and post-operative treatment and surgical treatment will also be illustrated. The exhibit will consist of 35 mm slides, anatomical moulages, photographs of x-rays and specimens, and fresh specimens.

Booth 4

Title: "Surgery of the Head and Neck"
Exhibitors: Maurice F. Snitman, Burton J. Soboroff, Irwin D. Horwitz, W. Garth Hemenway, Chicago
Institution: University of Illinois College of Medicine, Department of Otolaryngology

Description: The exhibit will consist of a series of photodiagrammatic sketches depicting the surgical anatomy as applied to the more common surgical procedures of the neck; e.g., radical neck dissection, laryngectomy, submaxillary dissection, etc.

Booth 5

Title: "Saphenous Ligation"
Exhibitor: Anthony M. Barone, Chicago

Description: The exhibit contains the history, etiology, symptoms diagnosis various tests, anatomy and pathology, complications, axioms and an analysis of 1000 cases. It includes color photos of specimens, drawings of tests, sculptures of leg before and after ligation; also sculptures showing the technique of the ligation and lettered charts.

Booth 6

Title: "A Technique of Radical Mastectomy"
Exhibitors: Peter A. Nelson, Robert L. Schmitz, David G. Edmunds, Chicago
Institution: Stritch School of Medicine, Mercy Hospital, Henry Schmitz Medical Foundation

Description: Pictorial representation of technique for radical mastectomy including technique of skin grafting. Purpose: to show what is considered a proper radical operation for carcinoma of the breast and to encourage more men to do it.

Booth 7

Title: "Rapid Freezing of the Bladder: An Experimental and Clinical Study"
Exhibitors: James H. McDonald, C. Bruce Taylor, Norris J. Heckel, W. A. Rosso.
Institution: Presbyterian Hospital in affiliation with the University of Illinois College of Medicine

Description: A new technique for rapid quantitative freezing of the wall of the bladder will be demonstrated. Rapid freezing will kill the normal cells in the wall of the bladder in the dog, but does not interrupt the continuity of the interstitial structure. Freezing of the wall of the bladder and the intramural ureter by this technique does not result in cicatrical contracture about the ureter in the experimental animal. Hydro-ureter and hydronephrosis are not produced. Suppuration of the frozen lesion does not occur following this technique. This technique has been applied and is safe for use in the human.

Booth 8

Title: "Surgical Treatment of Emphysematous Blebs, Bullae, and Congenital Pulmonary Cysts"
Exhibitors: Jerome R. Head, T. R. Hudson, Edward E. Avery, Chicago
Institution: Wesley Memorial Hospital, Northwestern University Medical School

Description: X-rays and drawings illustrating the diagnosis and the surgical treatment of pulmonary blebs, bullae, and cysts: 1) Suction drainage (Monaldi) of large unilocular blebs and bullae, 2) Plication and excision of multiple blebs, 3) Lobectomy and Pneumonectomy for multiple pulmonary cysts, 4) Excision of solitary epithelial-lined cysts, 5) Resection of accessory emphysematous pulmonary segments.

Booth 9

Title: "Experimental Bronchotracheal Anastomosis"
Exhibitors: R. W. Ehrlich, R. P. Meyer, J. I. Williams, C. B. Taylor, J. M. Dorsey, G. M. Hass, Chicago
Institution: Presbyterian Hospital in affiliation with the University of Illinois College of Medicine

Description: In recent years there has been an

increased interest in resecting segments of the tracheobronchial and bronchopulmonary tree. This exhibit describes and illustrates the feasibility and technique of performing a bronchotracheal anastomosis. Such a surgical procedure might well extend the limits of resectability in dealing with lesions at or near the corina. The function and fate of the transposed pulmonary tissue determined by physiologic and laboratory studies is presented and discussed.

Booth 10

Title: "Pathogenesis of Sickle Cell Anemia and Other Hereditary Hemolytic Syndromes"

Exhibitors: Karl Singer, Amoz I. Chernoff, Chicago

Institution: Department of Hematologic Research, Medical Research Institute, Michael Reese Hospital

Description: This exhibit will deal with the pathogenesis mechanisms of the hereditary hemolytic syndromes, with particular consideration of sickle cell anemia. It will be shown that in these conditions pathologic hemoglobins occur, and the role and distribution of these pigments will be demonstrated.

Booth 11

Title: "Iron Deficiency Anemia — A Dynamic Concept"

Exhibitors: Steven O. Schwartz, Sherman R. Kaplan, Chicago

Institution: Hektoen Institute for Medical Research of the Cook County Hospital

Description: The Exhibit portrays our dynamic concept of the development of iron deficiency, exhaustion of storage iron, and the pattern of fall of red cells and hemoglobin which is practically unvarying from individual to individual regardless of the cause of the iron deficiency. The causes, signs and symptoms, and treatment of this disorder are also included.

Booth 12

Title: "Blood Diseases" Clinical and Hematologic Manifestations

Exhibitors: Carroll L. Birch, Louis R. Limarzi, Chicago

Institution: University of Illinois College of Medicine

Description: The blood, bone marrow and clinical characteristics of the common hematologic diseases are shown by 4 x 5 inch transparencies and by 15 x 20 inch enlargements with special projectors.

Booth 13

Title: "Mechanism of Bile Formation as Determined by Clearance Measurements"

Exhibitors: D. M. Green, D. L. Cook, Chicago

Institution: G. D. Searle & Company, Chicago

Description: Clearance techniques similar to those used in renal function studies were applied to the problem of bile formation in the dog. Measurements of biliary clearance of a variety of substances over a range of plasma concentrations indicate two distinct mechanisms for bile formation. Electrolytes, water and some crystalloids of low molecular weight appear to be handled by a process resembling filtration. Certain more complex crystalloids, notably the dyes, are cleared by a secretory mechanism. The rates of the two processes may be varied independently of one another.

Booth 14

Title: "Differential Diagnosis of Jaundice"

Exhibitors: M. A. Spellberg, Hugh Bennett, William D. Mosiman, Lyle A. Baker.

Institutions: Medical Service, Veterans Administration Hospital, Hines; University of Illinois College of Medicine; Northwestern University Medical School.

Description: .A practical classification of jaundice will be presented. This will be correlated with other classifications. It will be shown that some classifications have a therapeutic approach, while others have an anatomic or physiologic approach. The diagnostic features, both clinical and laboratory, of the various groups will be elucidated. The above features will be demonstrated with charts, tables and diagrams. Abstracts of representative cases will be given. These will include colored photographs of gross and microscopic sections, x-rays, as well as clinical and laboratory data.

Booth 15

Title: "Correlation of Unipolar Electrocardiography"

Exhibitors: George A. Hellmuth, Allen H. Weiss, Arthur G. Mulder, Chicago

Institution: Stritch School of Medicine, Loyola University

Description: The purpose of this exhibit is to present in a simplified manner the practical aspects of the rapidly mounting concepts in unipolar electrocardiography to those not directly associated with the field. Its aim is a better liaison between the consultant and those requesting consultation.

The exhibit will consist of four parts: (1) Important physiologic concepts in the understanding of electrocardiography.

(2) Graphic representation of normal deviations in the electrocardiogram as affected by normal positional changes.

(3) The mechanism of the electrocardiographic pattern in bundle branch block and heart strain.

(4) The pattern in myocardial infarctions.

Each section will be presented in a simple understandable fashion aided by the use of models. Great detail will be avoided as it is not only impossible, but it is also out of keeping with the purpose of the exhibit.

The drawings and models are prepared by Mr. Tom Jones.

Booth 16

Title: "Practical Gynecology"

Exhibitor: Walter J. Reich, Mitchell J. Nechtow, Angela Bartenbach, Chicago

Institution: The Cook County Hospital, Chicago Medical School, and the Cook County Graduate School.

Description: Practical procedures in gynecology: The indications, types and techniques of biopsies used in practical gynecology; the indications and the use of gynefold vaginal pessaries. Juvenile vaginoscopy; its indications and technique. Cytologic study for the diagnosis of early cancer. The diagnosis and treatment of trichomonas vaginitis; the technique of electrocauterization for chronic cervicitis; the utero-tubal insufflation in the study of sterility; the Huhner test; biopsy for the diagnosis of carcinoma; Wylie pessary for primary sysmenorrhea; injection treatment for intractable pruritus vulvae; the use of a simple intrapelvis hydrotherapy apparatus for pelvic inflammatory diseases.

Booth 17

Title: "Pregnancy in Bicornuate Uterus"

Exhibitors: Frederick H. Falls, Charlotte S. Holt

Institution: University of Illinois College of Medicine, Illinois State Department of Public Health

Description: The exhibit consists of models, drawings, lettered charts, and x-ray photographs illustrating the embryological development of the normal female genitalia and various anomalies which develop because of interference with this process. Comparative anatomy in other vertebrates are also shown and the analogy between these and the vicornuate uterus is pointed out. The complications which arise in women when such uteri become pregnant are depicted together with their suggested management.

Booth 18

Title: "Human Brain Preparations Mounted in Plastics"

Exhibitors: Otto F. Kampmeier, Mr. Emil W. Hospodar, Chicago

Institution: University of Illinois College of Medicine, Department of Anatomy

Description: Preparations of the brain, chiefly serial coronal and horizontal slices, cut in reference to the Frankfurt plane and variously stained, are shown, as well as colored sections of the head, including fetal specimens. The preparations are mounted as wet specimens, though surface-dried before embedding, in transparent plastics.

Booth 19

Title: "Mediastinal Tumors"

Exhibitor: James M. Christie, Irving Weissman, Champaign, Illinois

Institution: Christie Clinic

Description: Fifteen proven cases of chest tumors are presented. Differential diagnosis, roentgen findings, and techniques of therapy are discussed.

Booth 20

Title: "Demonstration of Pulmonary Pathology by the Use of Macroscopic (Christeller) Sections.

Exhibitor: J. Robert Thompson, Chicago

Institution: Municipal Tuberculosis Sanatorium.

Booth 21

Title: "Cancer of the Lung"

Exhibitor: Illinois Division, American Cancer Society

Institution:

Description: Twenty foot constructed exhibit containing four main panels, one each on: Statistics, Epidemiology, Diagnosis and Treatment of Cancer of the Lung. A left and right panel containing respectively pertinent questions and summary on this topic.

Statistics: Comparative statistics on relationship of lung cancer to all sites prior to 1900, to the present death rate of cancer of the lung in U.S.A. compared by sex and by site.

Epidemiology: Analysis of endogenous and exogenous factors and their causal relationship to cancer of the lung.

Diagnosis: An outline of all current diagnostic procedures for cancer of the lung with notes on their varying efficacy.

Treatment: Indication for surgery — survival rates. (The indication for surgery, curative measures showing survival rates from pneumonectomy and an outline of several palliative procedures).

Booth 22

Title: "Northwestern University Cleft Lip and Palate Institute"

Exhibitor: F. W. Merrifield, Chicago

Institution: Northwestern University and Children's Memorial Hospital

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Booth 23

Title: "Congenital Heart in Pediatrics" Based on Study of 600 Cases.

Exhibitors: Benjamin M. Gazul, Egbert H. Fell, William P. Mavrellis, Maurice Lev, Oldrich Prec, Raul Casas, Chicago

Institution: Hektoen Institute of Medical Research, Children's Division of Cook County Hospital, University of Illinois College of Medicine

Description: The clinical diagnosis of various types of congenital malformations of the heart are demonstrated by means of x-rays in the P.A., right and left oblique views, oesophagrams in various views, electrocardiograms, stethograms, angiocardiograms and cardiac catheterizations. Autopsy models and charts illustrating the hemodynamics are also shown.

Booth 24

Title: "Voluntary Health Insurance"

Exhibitors: Howard Brower and George Cooley, Chicago

Institution: Council on Medical Service, American Medical Association

Description: A graphic display of the types of voluntary health insurance plans available to the American people; the percentage of estimated eligible persons enrolled in each state under all types of voluntary agencies; and statistical indications of recent enrollment growth.

Audience participation encouraged by push buttons for each state. Buttons light each state individually to reflect enrollment in that state and a comparison with the national averages.

Booth 25

Title: "Radiation Injuries"

Exhibitors: Frederic T. Jung, Anthony C. Cipollaro, Howard A. Carter, Chicago

Institution: Council on Physical Medicine and Rehabilitation, American Medical Association

Description: Exhibit consists of posters, colored transparencies and demonstrational apparatus. At intervals demonstrational lectures will be presented showing: (1) Make-up and operation of the Geiger-Mueller Counter, (2) The absorption of radiation energy by variuos materials, (3) Ways and means to screen personnel from dangerous ionizing radiation, (4) Colored transparencies, showing radiation injuries.

Booth 26

Title: "Tuberculosis in Children"

Exhibitors: M. R. Lichtenstein and Samson Entin, Chicago

Institution: Municipal Tuberculosis Sanitarium of Chicago

Description: Educational exhibit illustrating various phases of tuberculosis in children by means of x-rays (translites), charts, graphs and tables. Diagnosis, prognosis and treatment, including chemotherapy.

Booth 27

Title: "Subscapular Paraffin Pack as an Adjunct to Thoracoplasty in the Treatment of Tuberculosis"

Exhibitors: William E. Adams, William M. Lees, and James M. Fritz, Chicago

Institution: Municipal Tuberculosis Sanatorium and the University of Chicago

Description: This exhibit consists of anatomical drawings and descriptive information relative to the use of a molded paraffin pack utilized to maintain a more adequate collapse in the patient for whom thoracoplasty is being performed. The more adequate the collapse is, the greater the number of patients who will ultimately be discharged from institutions and return to a gainful occupation.

In addition to the drawings, there will be actual photographs of patients before and after this procedure to demonstrate the lack of deformity usually found with a conventional thoracoplasty. Translites of x-rays taken before and after operation for the conventional thoracoplasty as well as after the use of a subscapular wax pack are also included.

Booth 28

Title: "Fresh Tissue Demonstration"

Exhibitor: Illinois Society of Pathologists

Institution:

Description: Demonstration of fresh tissue pathology. The material will include surgical and postmortem pathology.

Booth 29

Title: "Allergy and Alcoholism"

Exhibitor: Theron G. Randolph and Joseph Interlandi

Institution:

Description: This exhibit consists of a poster demonstration of the food constituents of commercially available alcoholic beverages; the results of the test ingestion of pure samples of corn, malt, grape, cane and apple spirits in specifically sensitized allergic individuals; the results of individual food tests in a small series of reformed alcoholics, and finally, the results of a survey of allergic symptoms and drinking habits in a group of 44 reformed chronic alcoholics. Evidence is presented in support of the concept that alcoholism is basically a manifestation of advanced chronic food allergy.

Booth 30

This exhibit will be described in the official program.

Booth 31

Title: "Arteriography in Peripheral Vascular Disease"

Exhibitors: D. Movitz, E. G. Warnick, Leo M. Zimmerman, Chicago

Institution: Cook County Hospital and Chicago Medical School

Description: The roentgenographic visualization of the arterial tree with contract medium affords valuable information as to the status of the peripheral vessels. In patients with either gangrene or arterial insufficiency, these data may aid in planning treatment. Patency of the main vessels, extent of narrowing of their lumina, irregularity in contour of vessel walls, and the presence of occlusions are visualized. Also the length of an occluded segment, the routes and extent of collateral circulation are revealed. Distal to a segmental occlusion the patency of the main vessels and the presence and extent of collaterals are determined.

Certain patterns of patency or of occlusion appear to be sufficiently consistent to be characteristic of the type of gangrene. Diabetic gangrene is associated with a clearly demonstrable patent femoral and popliteal artery, and also at least one and often two or all three leg vessels down to the ankle and even into the foot. Arteriosclerotic gangrene is characteristically associated with an occlusion of the femoral or popliteal artery, either segmental or complete. Diagnosis and exact localization of an embolus is readily demonstrable.

Aneurysms and arteriovenous fistula may also be demonstrated. Hemangiomas may also be ruled in or out by arteriography. Application of the various data may widen the therapeutic approach. Occluded segments of an artery may be resected and displaced by a graft from a vein or an artery. Also, the creation of an arteriovenous fistula with various modifications may possibly increase the blood flow distally.

A series of arteriograms are presented in patients with various types of peripheral arterial disease. These were obtained by injection of the radio opaque medium into the femoral artery at the groin while occluding somewhat that artery immediately proximal, and applying the x-ray at the end of injecting about 20 cc.

Booth 32

This exhibit will be described in the official program.

Booth 33

Title: "Medical Assistance Program — Illinois Public Aid Commission"

Exhibitor: Carl K. Schmidt, Jr., Executive Secretary

Institution: Illinois Public Aid Commission, Chicago

Description: This exhibit will consist of maps, charts, and pictures illustrating the work of the County Medical Society Advisory Committees appointed by the County Medical Societies in cooperation with the Illinois Public Aid Commission in the administration of the medical assistance program.

Booth 34

This exhibit will be described in the official program.

Booth 35

Title: "The Phantom Heart"

Exhibitor: Dale Houghland

Institution: The Illinois Heart Association, Inc.

Description: The exhibit portrays the cardiovascular silhouette and its motions as seen by the fluoroscopic screen. It was originally designed as a training aid in demonstrating the principles of electrokymography.

THE ILLINOIS OFFICE OF CIVIL DEFENSE
Club Room No. 6

The Illinois Office of Civil Defense and the Illinois Department of Public Health have developed a series of exhibits to be displayed at the annual meeting of the Illinois State Medical Society.

In Club Room No. 6 there will be a display of posters and radiological monitoring instruments. Included will be an exhibit of an emergency chest set up by the doctors on the staff of the Elmhurst Hospital. These men have done an excellent job with local resources and should be given both recognition and the opportunity to share their practical ideas with doctors throughout the state.

FILMS ON ATOMIC BOMBING
Club Room No. 7

(Shown through the courtesy of the Surgeon, Fifth Army, the Illinois Office of Civil Defense, and the Illinois Department of Public Health)

Medical Effects of the Atomic Bomb

Part I (PMF 5058) .... 32 minutes
This film covers nuclear physics, physical destruction in Japan, and types of casualties

Part II (PMF 5148) ..... 37 minutes
This film shows the mechanical, thermal, and radiation effects of atomic blasts, with a summary and the basis for individual prognosis.

Part III (PMF 5149) ..... 28 minutes
This film is designed to acquaint professional and lay people with the importance and functions of medical services in atomic war.

Atomic Medical Cases (PMF 5143) ..... 37 minutes
This is a gripping film report, taken several weeks after the A-bomb explosions, showing the general devastation of Hiroshima and Nagasaki, the damages to the medical and hospital services, and the casualties.

Pattern for Survival — Cornel Films, Paramont Building 1501 Broadway, New York, N. Y. ... 30 minutes
This is a practical presentation of expected effects from an A-bomb explosion and prevention of casualties by expedient action on hearing the air raid alert.

MEDICAL MOTION PICTURES

SCIENTIFIC MOVIES

West Room

8:30—Physiological Basis for the Action of ACTH in Human Beings — 42 minutes

9:13—The Therapeutic Use of ACTH in Human Disease — 33 minutes

9:47—Aureomycin — The Versatile Antibiotic — 23 minutes

10:11—Streptomycin Drugs in the Treatment of Tuberculosis — 30 minutes

10:42—Tic douloureux: Diagnosis and Treatment — 36 minutes

11:19—Varicose Veins and New Type Stripper — 30 minutes

LUNCHEON

1:15—Introduction to Aphasia — 31 minutes

1:47—Diagnosis and Surgical Treatment of Pulmonary Stenosis — 24 minutes
Willis J. Potts, W. L. Riker, Stanley Gibson, Chicago

2:12—Hallux Valgus — Bunion Operation — 15 minutes

2:28—Obstetric Roentgenography — 16 minutes

2:45—Physical Medicine in the Home Treatment of Arthritis — 30 minutes

3:16—Subtotal Gastrectomy — 40 minutes
Philip Thorek, Chicago

3:57—Simplified Thyroidectomy — 18 minutes
Joseph Bellas, Peoria

4:16—Pectenotomy vs Divulsion in Ano Rectal Disease — 15 minutes
Manuel Spiesman, Chicago

4:32—Gastrointestinal Cancer — Problem of Early Diagnosis — 30 minutes

TECHNICAL EXHIBITORS

ABBOTT LABORATORIES

Booth No. 3

Abbott will exhibit ABBOCILLIN-DC, 600,000 units of penicillin in a 1-cc. cartridge; AEROHALOR, a simplified device for the inhalation of finely powdered medicament; DAYALETS and OPTILETS, multiple vitamin tablets with vitamin B_{12} and synthetic vitamin A; SULESTREX PIPERAZINE, an odorless and practically tasteless form of estrone for oral administration; SUCARYL, a dynthetic, heat-stable, non-caloric sweetening agent, and TRUOZINE **Dulcet** Tablets, candylike medication containing sulfadiazine, sulfamerazine and sulfamethazine.

A. S. ALOE COMPANY

Booth No. 65

Visit Booth No. 65 where the Aloe representative will show you a cross section of the complete stock of physician's equipment and supplies carried by the A. S. Aloe Company. Highlighted will be the new Model Steeline — Tomorrow's Frequent Room Furniture of Today — Featuring the Body Contour table top, magnetic door catches and advanced design — all in new decorators' colors.

AMERICAINE PHARMACEUTICALS, INC.

Booth No. 31

Two new products will be featured by Americaine, Inc., at the coming meeting: (1) Americaine Liquid Urethral Anesthetic for local anesthetization of the urethra prior to instrumentation, examination, catheterization, etc., and (2) the Lectron-o-Scope, an electronic amplifying stethoscope providing up to 50 times amplification of heart and chest sounds for earlier and more accurate diagnosis.

New uses and reports of clinical tests of AMERICAINE Tropical Anesthetic Ointments (Clear and w/Chlorophyll) in the fields of dermatology, obstetrics, and proctology, will also be displayed.

AMERICAN HOSPITAL SUPPLY CORP.

Booth No. 11

American Hospital Supply will display the full line of Baxter Intravenous solutions, including Travert, the new Invert Sugar solution, and blood transfusion equipment with all expendable accessories; complete line of high-titred, fast acting blood typing and grouping serums; Courtland Plasma, which is the only plasma with filter built into the bottle. It liquefies in seconds and comes equipped with a sterile administration set so that when emergencies strike, no time is wasted in dispensation; also the Krasno-Ivy Flicker Photometer for early diagnosis of some types of heart disease, and, therapeutically, for checking the results of prescribed treatments.

AMERICAN OPTICAL COMPANY

Booth No. 18

We will display new developments in scientific and ophthalmological equipment, such as microscopes, diagnostic and refractive equipment. The Phoroptor, Project-O-Chart, Ophthalmoscopes, Retinescopes and Hague Cataract Lamp.

AMERICANA CORPORATION

Booth No. 52

We feature the Encyclopedia Americana, which is so typically American, together with the Book of Knowledge, which through the years, has been the educational bulwark of school children — more than 800,000 sets have been sold.

THE ARMOUR LABORATORIES

Booths No. 60 and No. 61

The Armour Laboratories will welcome members of the Illinois State Medical Society to visit the Armour Exhibit while attending their annual convention. Information on new items in the field of Endocrinology, particularly Acthar (ACTH) is available to physicians on request.

AYERST, McKENNA & HARRISON LIMITED

Booth No. 5

Physicians attending the Illinois State Medical Society meeting are cordially invited to visit the AYERST booth. Our representatives will be happy to answer your inquiries relative to "Premarin", "Premarin" with Methyltestosterone and all other AYERST specialties.

BABY DEVELOPMENT CLINIC

Booth No. 51

The Baby Development Clinic will feature the psychological aspects of feeding, as well as several products suited to infant and child feeding and care. The manufacturers of these products support the educational work of this organization.

The Baby Development Clinic will announce a new service to be known as the Maternity Counselling Service which will be of interest to doctors for their maternity patients.

A. C. BARNES COMPANY

Booth No. 16

The A. C. Barnes Company, New Brunswick, New Jersey (Booth No. 16) cordially invites all physicians to visit their exhibit. ARGYPULVIS, a recent addition to the BARNES line, will be featured by a series of illuminated color transparencies depicting an effective new treatment for Trichomonas vaginalis vaginitis. Literature and professional samples will be available. ARGYROL and OVOFERRIN also will be on display.

BLUE CROSS PLAN FOR HOSPITAL CARE

Booth No. 17

The Exhibit shows the growth, benefits, services, etc. of Blue Cross and Blue Shield.

THE BORDEN COMPANY

Booth No. 84

Borden representatives will be more than pleased to discuss a new powdered infant food with you. Bremil is a completely modified milk in which nutritionally essential elements of cow's milk have been adjusted in order to supply the nutritional requirements of infants deprived of human milk. Also exhibited will be Mull-Soy, Dryco, Biolac and other prescription products.

CAMBRIDGE INSTRUMENT CO., INC.

Booth No. 56

In the Cambridge Booth No. 56, you will find the well known Cambridge Simpli-Scribe Model Direct-Writing Portable Electrocardiograph, the Cambridge Standard String Galvanometer Electrocardiograph,

both in the Simpli-Trol Portable and the Mobile Model Electrocardiograph-Stethograph with Pulse Recorder.

Also exhibited will be the Cambridge Electrokymograph, Cambridge Plethysmograph, Cambridge Educational Cardioscope and the Cambridge Explosion-Proof Cardioscope for use in the operating room.

The Cambridge Engineers in attendance will be glad to discuss your problems and make recommendations accordingly.

CAMEL CIGARETTES

Booths No. 27 and No. 28

CAMEL Cigarettes will feature color slides of background data from their newest research. After weekly examinations of the throats of hundreds of men and women smoking CAMEL Cigarettes exclusively for thirty days, throat specialists reported "Not one single case of throat irritation due to smoking CAMELS."

CARNATION COMPANY

Booth No. 19

You are invited to visit the Carnation Company booth, No. 19, where you will see an attractive display presenting some interesting information on the various uses of Carnation Vitamin D Evaporated Milk for infant feeding, child feeding and general diet purposes. The method by which Carnation Milk is generously fortified with Vitamin D — 400 U.S.P. Units per reconstituted quart — will be explained. Valuable literature will also be available for distribution.

THE CHICAGO DIETETIC SUPPLY HOUSE, INC.

Booth No.24

You are cordially invited to visit our display of CELLU DIETETIC PRODUCTS, for use in Low Sodium, Allergy and Sugar and Starch restricted diets. Unsalted Salmon and Tuna Fish, unsalted canned White Bread (made with unbleached flour, a minimum amount of yeast and without milk), Barley Wafers, canned Rye Bread, Juice-pak Fruits and Sugarless Sweets will be featured. Samples and literature available upon request.

CHICAGO PHARMACAL COMPANY

Booth No. 39

The Chicago Pharmacal Company exhibit features four outstanding specialties of its complete high quality pharmaceutical line; namely, ANPLEX, ESTRADIOL, TOLYSPAZ, AND CALCIUM LEVULINATE. With emphasis also on the above Chimedic specialties, the exhibit features a most comprehensive, up-to-date catalogue with a table of interesting service features and a therapeutic index of interest and value to the medical profession.

CHICAGO X-RAY SALES COMPANY

Booths No. 35 and No. 36

Chicago X-Ray Sales Company is the exclusive distributor for the North American Philips Company, pioneers of X-Ray apparatus in the medical field.

CIBA PHARMACEUTICAL PRODUCTS INC.

Booth No. 80

Ciba Pharmaceutical Products, Inc., Summit, New Jersey, (Booth No. 80) invites you to visit its exhibit which features PYRIBENZAMINE, HCL, the antihistaminic drug for prevention and relief of anaphylaxis and many forms of allergy. ANTISTINE, the effective antihistaminic with few side effects, will also be featured.

Representatives in attendance will gladly answer any questions about these and other Ciba products

THE COCA-COLA COMPANY

Booth No. 14

Ice-cold Coca-Cola served through the courtesy and cooperation of the Coca-Cola Bottling Company of Chicago, Inc., and The Coca-Cola Company.

COMMERCIAL SOLVENTS CORPORATION

Booths No. 69 and No. 70

CSC Pharmaceuticals will feature three new pharmaceutical products in its display in Booths 69 and 70. One of the most important is Dia-Discs, a new diagnostic aid to determine the antibiotic of choice in any given case. Two potencies each of the six most commonly used antibiotics are contained in Dia-Discs. Tolanate, a more effective agent in the treatment of hypertension, and Sirnositol, a highly potent lipotropic agent which contains choline gluconate and inositol, are included in the exhibit.

CORECO RESEARCH CORPORATION

Booth No. 43

The "CORECO" Camera is designed to photograph all surface areas of the body — from 1 to 1 close-up pictures to half-body size — and all cavities of the human body, such as mouth, throat, ear, nose, vagina and rectum. The camera carries its own especially developed, fully color-corrected bulb and a mechanism for complete control of its color temperature and exposure within the Camera itself. There is an automatic view finder synchronized with the automatic camera mechanism to permit viewing until a fraction of a second before exposure. The camera provides for automatic focusing.

An x-ray film applicator is included, making it possible to record all sizes and densities of x-ray film on Kodachrome transparencies.

DANIEL SURGICAL & MEDICAL SUPPLIES

Booth No. 15

Chart your course now to DANIELS SURGICAL & MEDICAL SUPPLIES, Booth No. 15 — an interesting and attractive display of the latest equipment including: American and Castle Sterilizers and Autoclaves, Burdick Diathermy and Electrocardiographs, Hamilton Furniture, Ritter Equipment and many new time saving items for your every day use.

F. A. DAVIS COMPANY

Booth No. 73

The new Cyclopedia of Medicine, Surgery and Specialties is now on display. Be sure to see it and ask our representative about special terms in effect until publication is completed in a few months. Also a complete line of general and specialty publications including Stroud-Cardiovascular Diseases; Troncoso-Internal Diseases of the Eye; Pillmore· Clinical Radiology; McCrea-Clinical Cystoscopy; Alpers-Clinical Neurology; Kampmeier-Physical Examination, and many others.

THE DENVER CHEMICAL MFG. CO., INC.

Booth No. 76

Galatest powder for the instantaneous determination of urine sugar, and Acetone Test (Denco) for the detection of acetone in urine, will be exhibited. You are cordially invited to visit our booth for demonstration of these "spots tests" for sugar and acetone. Galatest and Acetone Test (Denco) offer advantages of accuracy, simplicity and economy in routine urinalysis.

DOAK COMPANY, INC

Booth No. 40

The Doak Company, Inc., will exhibit nationally recognized dermatological preparations, among which are:

SPERSOL—a new addition to the armamentarium for treatment of Tinea Capitis. Contains Tetra-Chloro-Benzoquinone (Spergon) in 5%, 10% and 20% concentrations.

SOLAR CHEAM-(Doak) skin protecting cream against excessive exposure to sun light. The special base is water repelling and protects skin for a long period of time.

PASTA DURET-(Doak) a formula favorably described in French literature and successfully used in treatment of neurodermatitis, eczema and psoriasis.

TARPASTE-(Doak) contains 5% Tar Distillate (Doak), an approach to provide the medical profession with a carefully standardized coal tar preparation.

DOHO CHEMICAL CORPORATION

Booth No. 77

The Doho Chemical Corporation and its subsidiary, Mallon Chemical Corporation, makers of AUGALGAN, O-**TOS**-MO-SAN and RECTALGAN, are proud to announce their new nasal decongestant, RHINALGAN — a balanced formulation of two active chemical compounds that gives prolonged vasoconstriction — used as a spray, in our patented Dohony Spray-O-Mizer (combination dropper and spray) — pleasant tasting, with no systemic effect (pressor or respiratory), and can be used safely for infants and children. Our representatives will be happy to explain the merits of RHINALGAN and distribute samples of this innovation.

DOME CHEMICALS INC.

Booth No. 50

Dome Chemicals Inc. takes pleasure in exhibiting its extensive line of dermatologicals. Among the products of interest are;

DOMEBORO PACKETS and TABLETS — The Modernizied Burow's Solution

KOLPIX "A" and "D" — Washable, Whole Crude Coal Tar ointments with the black color successfully disguised.

DOMOGYN — New, therapeutic ACID douche powder for feminine hygiene and common gynecological problems.

QUATRASAL — Highly effective fungicidal solution for Athlete's Foot and other types of superficial mycoses.

EISELE & COMPANY

Booth No. 23

Eisele & Company will display its line of green and white plungered hypodermic syringes with plain luer, lock, and metal tip, also Interchangeable type as well as their complete line of clinical thermometers, hypodermic needles and specialty glassware for the profession.

ELI LILLY AND COMPANY

Booth No. 71

Your LILLY medical service representative cordially invites you to visit the LILLY exhibit located in Booth No. 71. Many new therapeutic developments will be featured and literature on these products will be available. Visiting physicians will be aided in every way possible.

ENCLYCOPAEDIA BRITANNICA

Booth No. 25

The exhibit will consist of the current printing of Encyclopaedia Britannica with sustaining and Library Research Services.

H. G. FISCHER & CO.

Booth No. 41

Inspect H. G. Fischer & Co.'s modern, efficient, low priced x-ray and physical therapy equipment. Let them point out many features of advantage in these representative units and other models not on display and also explain their extremely liberal terms of sale. Your visit welcome — no obligation.

GENERAL ELECTRIC X-RAY CORP.

Booth No. 89

Manufacturers of complete x-ray equipment from portable diagnostic to 2,000,000 volt therapy apparatus — electrocardiograph — diathermy — x-ray accessories and supplies. GE's service is available to you at more than 60 offices throughout the United States and Canada. Why not discuss your particular problems with us?

GYNECOLOGICAL SPECIALTIES, INC.

Booth No. 13

Gynecological Specialties, Inc., cordially invites you to visit their booth where LAUTRIC is featured. Non-toxic, odorless and stainless, LAUTRIC is a new and amazingly effective formula for the treatment of Trichomoniasis, Moniliasis, and other vaginal mucous membrane infections. Ideal as an office treatment — simple, soothing and pleasant to use as a home douche. LAUTRIC vaginal inserts also will be shown.

HANOVIA CHEMICAL & MANUFACTURING CO.

Booth No. 21

Don't fail to ask for a demonstration of Hanovia's new Short Wave Diothermy. It is outstanding in performance and has many features. A complete line of general body and orificial quartz lamps will be displayed. Black light for diagnostic purposes, infrared lamps and Germicidal lamps for the destruction of air-borne bacteria.

THE HARROWER LABORATORY, INC.

Booth No. 32

The Harrower Laboratory, Inc. technical exhibit will feature two new products. Harrower professional service representatives will be at the exhibit to give you information on these new products. Reprints, samples and literature will be available.

HOLLAND-RANTOS COMPANY, INC.

Booth No. 59

Ask H-R representatives: (1) why it is to your advantage and that of patients to specify KOROMEX Diaphragms, Jelly and Cream for **dependable** conception control; (2) why NYLMERATE Jelly is so effective in treatment of vaginal trichomoniasis and moniliasis; (3) what other H-R products would be useful in your practice.

IRWIN, NEISLER & COMPANY

Booth No. 34

You are cordially invited to visit Irwin, Neisler & Company again this year at the Illinois State Medical Society annual meeting.

We'll be on hand to answer your inquiries regarding OBOCELL (double the power to resist food

in obesity), VERATRITE, VERTAVIS-PHEN, and other Irwin, Neisler research products; each developed with especial consideration of the practical problems which confront the physician in the day-to-day practice of medicine.

"JUNKET" BRAND FOODS

Booth No. 7

Essential facts on the chemistry of the rennet enzyme and the nutritional significance and psychologic value of rennet desserts in the diets of infants and adults will be explained. The enzymatic action of rennet in producing softer, finer, more readily-digestible milk curds is illustrated by enlarged photos. Literature giving the dietary application of rennet products is available for your reference.

KELLEY-KOETT MANUFACTURING CO.

Booth No. 1

Keleket X-Ray extends a cordial invitation to each member and guest to visit Booth No. 1. The newest Keleket radiographic fluoroscopic X-Ray unit will be displayed along with accessories and supplies. Keleket X-Ray is the oldest and foremost manufacturer of medical X-ray equipment with sales service offices throughout the United States and Canada.

LANTEEN LABORATORIES, INC.

Booth No. 37

LANTEEN LABORATORIES, INC., cordially extend an invitation to visit Booth No. 37. Representatives will be pleased to discuss the latest developments in diaphragm fitting technique embodying the use of the well known LANTEEN Flat Spring Diaphragm and JELLY. Also displayed will be Alkagel, an Aluminum Hydroxide preparation for reduction of gastric acidity, in convenient tablet form.

LEDERLE LABORATORIES DIVISION
American Cyanamid Company

Booth No. 67

You are cordially invited to visit our exhibit in Booth No. 67, where you will find representatives who are prepared to give you the latest information on Lederle products.

J. B. LIPPINCOTT COMPANY

Booth No. 79

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most imortant trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

M & R DIETETIC LABORATORIES

Booth No. 48

Our representatives for Similac and Cerevim will appreciate the opportunity to discuss with you the merits and use of our products in field of infant and child nutrition.

MATERNITY COSMETICS, INC.

Booth No. 45

Maternity Cosmetics will exhibit their Marion Phillips' Maternity Preparations. These "Committee-on-Cosmetics-Accepted" Creams for the expectant and new mother are your answer to the question of an aid to the dry, stretching skin.

Marion Phillips will be on hand and would like to invite you to stop by. She will be happy to have the opportunity to discuss her preparations with you. There will be samples and literature available about these entirely new twin emollients and the new Cream Deodorant.

MEAD JOHNSON & COMPANY

Booth No. 4

MEAD JOHNSON & COMPANY, Evansville, Indiana (Booth No. 4). Dextri-Maltose, Oleum Percomorphum, Pablum, Pabena, Olac and other Mead Products used in Infant Nutrition will be on display at the Mead Johnson Exhibit at your Illinois State Medical Society meeting. Protenum, a new high protein product, will be displayed. Also, Lonalac, for low sodium diets.

Our representatives at the exhibit will be glad to discuss with you the new improvements of Amigen and Amisets.

MEDICAL AIDS, INC.

Booth No. 78

Medical Aids, Incorporated feature a complete line of pressure bandages, including the well-known Dalzoflex and Primer combination, Nulast bandage constructed of Viscolax Rubber threads and Polyestol, an elastomer produced by reacting Methyl Salicylate, indicated in treatment of acute rheumatic conditions, etc.

MEDICAL ARTS SUPPLY COMPANY

Booth No. 26

The Medical Arts Supply Company slogan "From a Bank Pin to an X-Ray" signifies the comprehensive service we offer to the physician.

We represent outstanding surgical manufacturers such as Sklar, Hamilton, Allison, Birtcher, Shampaine, Welch Allyn, Baum, Becton Dickenson, Bausch & Lomb, Davol, Castle, Pelton, National and a host of other familiar names.

In a visit to our booth, you will find representative merchandise of all these firms.

MEDICAL PROTECTIVE COMPANY

Booth No. 64

The Medical Protective Company invites you to visit its Booth Number 64. The Company's representatives are thoroughly trained in Professional Liability Underwriting and they are entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to the relationship. They will be glad to explain how this Company meets the exacting requirements of adequate liability protection, which are peculiar to the Professional Liability field.

MEDCO PRODUCTS COMPANY

Booth No. 66

Your meeting is one of more than 60 state, sectional and national meetings where more than 90,000 physicians in 1951 will have an opportunity to see the very interesting MEDCOTRONIC low volt generator. Make it a point to visit our both where our representative will be glad to demonstrate the COUNCIL ACCEPTED MEDCOTRONIC.

MOSS X-RAY EQUIPMENT COMPANY

Booths No. 53 & No. 54

To be exhibited for the first time at this meeting will be the new Universal "M. P. Master" Diagnostic x-ray machine. This unit permits the doctor to start with a small unit and gradually build up by means of purchasing additional components to a full size X-ray machine.

Various combinations are available for the special-

ists, with all components readily interchangeable.

Also on display will be a variety of physical therapy equipment, including the new "Micro-Wave" and other assorted medical equipment.

V. MUELLER & COMPANY

Booths No. 29 & No. 30

A Representative selection of instruments and equipment for all branches of surgery and the latest in modern medical furniture will be displayed. A cordial invitation is extended to visit our booth.

MAURICE NATENBERG

Publishers Representative
Booth No. 12

This display will include the outstanding publications of the following firms: Appleton-Century-Crofts, Inc.; Grune and Stratton, Inc.; Oxford University Press, Inc.; The Williams & Wilkins Company and the Year Book Company.

The entire field of medicine and surgery will be covered adequately, and many of the books shown are considered classics of medical literature.

THE NESTLE' COMPANY, INC.

Booth No. 55

LACTOGEN: Spray Dried cow's milk modified with added Lactose for infants requiring an easily digested formula.

DEXTROGEN: Evaporated milk modified with added dextrin-maltose providing an easily prepared, low cost formula.

AROBON: Derived from carob flour with added starch for use in quick, effective control of diarrhea. Clinically proven, easily administered, pleasant tasting.

ORTHO PHARMACEUTICAL CORP.

Booth No. 20

ORTHO cordially invites you to visit Booth No.20. Featured will the ORTHO KIT, a new convenient and complete kit containing the requisites for conception control in a beautiful woven plastic, zippered purse.

New products displayed will include DIFFUSIN (hyaluronidase), MASSE' Nipple Cream and other new Gynecic pharmaceuticals.

PARKE, DAVIS & COMPANY

Booth No. 62

Medical Service Members of the PARKE, DAVIS & COMPANY Staff will be in daily attendance at our commercial exhibit for consultation and discussion of the various products listed in our Pharmaceutic, Antibiotic, and Biologic Catalog. Important Specialties, such as Chloromycetin, Penicillin S-R, Benadryl, Vitamins, Oxycel, Thrombin Topical, Influenza Virus Vaccine, and others will be featured.

You are most cordially invited to visit our exhibit with the assurance that your personal interest will indeed be very much appreciated.

PHILIP MORRIS & CO. LTD., INC.

Booth No. 49

Philip Morris and Company will show the results of research on the irritant effects of cigarette smoke. These results show conclusively that Philip Morris are less irritating than other cigarettes. An interesting demonstration will be made on smokers at the exhibit which will show the difference in cigarettes.

RIKER LABORATORIES, INC.

Booth No. 38

The Riker Laboratories exhibit will feature Veriloid, a product of Riker research. Veriloid represents a potent alkoloidal fraction from Veratrum viride, biologically standardized for hypotensive activity in mammals. Veriloid represents a new active principle, not heretofore available, and useful in the treatment of all forms of hypertension.

A. R. ROBINS COMPANY, INC.

Booth No. 22

The A. H. Robins Company display is featuring the sedative-antispasmodic, DONNATAL; the antirheumatic PABALATE: ENTOZYME, digestant with the unique "Peptomatic" action; ALLBEE WITH C, our high potency "B" Complex capsules with ascorbic acid; and PHENAPHEN WITH CODEINE, our new analgesic Robins Medical Service Representatives will welcome the privilege of discussing with physicians attending the meeting these and other products in the company's line of prescription specialties.

J. B. ROERIB AND COMPANY

Booth No. 46

Members of the Illinois State Medical Society are cordially invited to visit the exhibit of J. B. Roerig and Company. Members of the Professional Service Department will be on hand to extend the courtesies of the Department to all visitors.

SANDOZ CHEMICAL WORKS, INC.

Booth No. 74

It is with a great deal of pleasure and pride that we invite you to visit our scientific exhibit on vascular headaches. Our booth Number is 74. Mr. James L. Bartz, our Chicago representative, will gladly welcome you.

W. B. SAUNDERS COMPANY

Booth No. 88

We invite all doctors attending the meeting of the Illinois State Medical Society to visit our exhibit where Mr. Charles Jennison will display a complete line of our books including Hyman's "Integrated Practice of Medicine", Hyman's (new) "Progress Volume", Conn's "1951 Current Therapy", Anson's "Atlas of Human Anatomy", Bocus' "Postgraduate Gastro-enterology", Sodeman's "Pathologic Physiology", Sweet's "Thoracic Surgery", Colonna's "Regional Orthopedic Surgery", Jackson's "Broncho-esophagology", Shanks' "Textbook of X-Ray Diagnosis", Smith's "Plastic Surgery", Friedberg's "Diseases of the Heart", American College of Surgeons' "Surgical Forum", Alvarex' "The Neuroses", Hollinshead's "Functional Anatomy of the Limbs and Back", Schwab's "Electroencephalography in Clinical Practice", Cecil's (new 8th edition) "Textbook of Medicine", Levine's (new 4th edition) "Clinical Heart Disease", Major's (new 4th edition) "Physical Diagnosis", and many other new books and new editions.

SCHERING CORPORATION

Booth No. 85

Sulamyd (sulfacetimide Schering) will be featured at the exhibit. From a pharmacological and toxicological standpoint, sulamyd deserves preference over other sulfonamides now in use for the treatment of infections of the urinary tract.

Trimeton and Chlor-Trimeton, two outstanding antihistamines, and Coricidin, Schering's treatment for the common cold, will highlight the exhibit.

Schering Representatives will be present to welcome you and will be happy to answer inquiries concerning Schering's new products and other pharmaceutical specialties.

JULIUS SCHMID, INC.

Booth No. 47

RAMSES Vaginal Jelly will be featured in demonstrations by representatives. Also will be shown the RAMSES Physician's Prescription Packet No. 701, Tuk-A-Way Kit.

SEALY MATTRESS COMPANY

Booth No. 57

The Sealy Mattress Co. will exhibit the nationally famous Sealy Orthopedic Firm-O-Rest and companion box spring. This bedding was one of the first pieces of sleep equipment in America to receive the approval for advertising in the American Medical Association Journals.

In the past two and one-half years this bedding has been exhibited at most of the important medical conventions in the United States and has become the world's largest selling orthopedic type mattress.

Also to be exhibited for the first time is Sealy's new junior Posturepedic mattress and box spring. This sleep equipment is especially designed to be used by children from 4 years to 17 years, during the all important proper posture forming years. The junior Posturepedic is also accepted for advertising in American Medical Association Journals.

G. D. SEARLE & COMPANY

Booth No. 75

You are cordially invited to visit the Searle Booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Banthine, the true anticholinergic drug for the treatment of peptic ulcers; Dramamine, for the prevention and active treatment of motion sickness; and Alidase, Searle brand of hyalronidase which permits subcutaneous feedings at intravenous speed.

Other time proven products of Searle Research on which information may be obtained are Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Diodoquin, Pavatrine, and Pavatrine with Phenobarbital.

SECURITY LABORATORIES

Booth No. 2

Security Laboratories, Burlington, Iowa, the Midwest's complete physicians' and surgeons' supply house, is exhibiting Hamilton Furniture, the Burton Super Power Light, Burdick Electrocardiograph and Diathermy, Sklar Instruments, Profex-ray, McKesson Basal Metabolor, American Systoscope Makers, Inc., Urological Instruments and catheters, Bard Parker, Spencer, Welch-Allyn, Bausch & Lomb products, Ritter Equipment, the Raytheon Microtherm Diathermy, products of Wilmot Castle Company, Pelton & Crena Company, and other leading manufacturers.

The exhibit will be under the direction of Security Laboratories' Illinois representatives.

SMITH, KLINE & FRENCH LABORATORIES

Booth No. 6

"Resodec" is a revolutionary new development in the management of congestive heart failure. This remarkable substance produces the effect of cutting the patient's salt intake approximately in half. It does this by removing the sodium from the contents of the intestinal tract and carrying it out of the body in the feces.

Thus "Resodec" not only gives you a positive means of achieving **adequate** sodium control . . . . . but also frequently allows your patients greater leeway in selecting foods.

E. R. SQUIBB & SONS

Booths No. 81 & No. 82

E. R. Squibb & Sons look forward to seeing you at the annual meeting of the Illinois State Medical Society.

In support of the active scientific program which has been arranged you will find the Squibb representative glad to discuss all relative products. Also, for your convenience, selected professional leaflets will be available which you may take or request us to mail to your home.

Please visit the Squibb booth.

STANDARD AIR SERVICE COMPANY

Booth No. 83

Specializing exclusively in room air conditioners for more than two decades!

STANDARD X-RAY COMPANY

Booth No. 8

In Booth No. 8, The Standard X-Ray Company will exhibit and demonstrate the new STANDEX X-RAY APPARTUS. This apparatus was designed especially for installation in private offices, clinics and small hospitals. It is available in several capacities and types to suit each individual requirement. An attendant will be most pleased to demonstrate this apparatus to visitors and answer inquiries. Do not fail to stop and see this new apparatus whether you are an immediate prospect or not.

SUTLIFF & CASE COMPANY, INC.

Booth No. 72

We always find it a pleasure to exhibit at the Illinois State Medical Society convention. This year our exhibit deals with Casate Sodium which was developed for marketing by our laboratory and research department.

Since Casate Sodium has been on the market, many doctors have found that it has lived up to its advance promises as an effective and safe arthritic treatment.

We hope that we will have the pleasure of seeing you at our booth.

UNIVERSAL PRODUCTS CORPORATION

Table Space

Of special interest is the new "Surgeon's Fingalyte". You have often wished to have a light at the end of your finger tip. "Fingalyte" is just that, penetrates and throws the light on and into all tissues or crevices. It is low wattage and cool for trans-illumination. Will save time for many Surgeons and General Practitioners. Another feature is the headlight that weighs only two ounces, all contained in a small case in a constant vapor sterilizer bath. The Surgeon's "X-L-Lyte" will also be demonstrated. This instrument is not new, but has been in service for 15 years and over 60,000 in use. If you don't have one, see it.

U. S. VITAMIN CORPORATION

Booth No. 63

Exhibit features new and complete lipotropic therapy . . . . METHISCHOL . . . . the **original** combination of five proven lipotropic agents: B_{12}, choline, methionine, inositol and liver extract.

Also, see and taste for yourself the new and different sodium-free salt substitute — CO-SALT —

a great boon to your patients on restricted sodium intake.

Professional samples and literature will be distributed at our booth.

THE UPJOHN COMPANY

Booth No. 9

The Upjohn exhibit will present the anticoagulant family: Heparin, Depo-Heparin, and Dicumarol, with particular emphasis placed upon Dupe-Heparin.

When heparin is prepared in a gelatin vehicle (Depo-Heparin) and administered intramuscularly, marked prolonged effects are obtained. A single injection of 1cc. (200 ng) of Depo-Heparin will prolong the blood coagulation time for about twenty-four hours.

VAISEY-BRISTOL SHOE COMPANY

Booth No. 87

Jumping Jacks are the distinctive and entirely different type of children's shoe. They are made to encourage proper walking habits and in so doing, they stimultaneously help the development of strong and perfect feet. They are shoes which promote foot health in youngsters by permitting their feet to flex naturally. The construction of Jumping Jacks gives recognition to the fact that the child's foot is in the all important formative years. Jumping Jack shoes are the nearest thing to walking barefoot as they allow the feet to exercise normally. At the same time Jumping Jacks afford the wearer adequate protection from stones and sharp objects and hard walking surfaces.

VARICK PHARMACAL COMPANY

Booth No. 86

Digitaline Nativelle, chief active principle of digitalis purpurea, is featured in a comprehensive exhibit of the Varick Pharmacal Company of New York. This world-renowned cardiotonic — the first of the digitoxins — has become especially favored because of its more complete absorption and its uniform rate of dissipation which enable it to maintain the maximum efficiency obtainable.

Shown in conjunction with the above, is the new sodium and lithium free salt substitute, Diasal, which so remarkably duplicates the taste and texture of salt. Diasal, for patients on low-sodium diets, helps restore flavor to bland, saltless foods and keeps dieters on their diets.

WESTINGHOUSE ELECTRIC CORP.

Booth No. 58

In the Westinghouse exhibit will be shown all of the new and popular X-Ray accessories.

Doctors visiting the Westinghouse Booth will be given an opportunity to solve the mystery radiograph. The two contestants whose identification of this radiograph is most accurate will each receive a Fluoro-thin Illuminator.

WINTHROP-STEARNS INC.

Booth No. 10

WINTHROP-STEARNS INC., New York, extends a cordial invitation to visit booth No. 10 where representatives will be on hand to discuss the latest therapeutic contributions made by this firm.

Featured will be THENFADIL, a new and better antihistaminic which is exceptionally effective in bronchial asthma (82%) as well as other common allergic disorders; MILIBIS, new, virtually non-toxic amebacide; ARALEN, effective antimalarial, also specific for extraintestinal (hepatic) amebiasis; PLURAVIT DROPS, dispersible 8 vitamin liquid, including Drisdol, pleasing citrus flavor, stable, easily administered.

WYETH INCORPORATED

Booth No. 33

Wyeth Incorporated will feature Wychol, potent lipotropic therapy combining choline and inositol, and Wydase (formerly Hydase), the highly purified lyophilized hyalurondise, now widely used as a safe and efficient aid to hypodermoclysis and local anesthesia, will be featured along with such widely prescribed ethical specialties as S-M-A, Soprone!, Wycillin, Purodigin, Lentopen.

Trained representatives will be on hand to supply literature and samples of many outstanding therapeutic agents.

THE ZEMMER COMPANY, INC.

Booth No. 68

We cordially invite the members of the Illinois State Medical Society to visit our exhibit Booth No. 68, where we will have on display many of our leading pharmaceutical preparations.

Our representatives, Mr. A. C. Carroll, Mr. M. H. Carrier, and Mr. R. A. Ehlers, will be in charge of our exhibit and will be pleased to talk with you about our products.

ELECTRONIC SURGICAL EQUIMENT CO., INC.

Booth No. 8

Exhibited here is the RADIOSURG SCALPEL Operating Unit (fully rectified construction), a portable radio frequency surgical apparatus of advanced engineering design. This precision instrument permits the use of varied electronic surgical methods to meet the minor surgical needs of the general physician, proctologist, gynecologist, or surgeon. Constructed according to exacting specifications, it supplies ideal current characteristics.

Visit

THESE EXHIBITORS FOR VALUABLE INFORMATION ON NEW AND USEFUL PRODUCTS

ORIGINAL ARTICLES



Diagnosis and Treatment of Unusual Conditions in Infants and Children

John L. Reichert, M.D.
Chicago

Five unusual conditions have been culled from a review of the records of several hundred unusual cases seen at The Children's Memorial Hospital in the past five years. The conditions being reported were selected on the basis of their fundamental pediatric interest, and on the fact that special pediatric elements of diagnosis and/or management were essential to a proper course of conduct. I am acting here solely as a reporter and claim no credit for the diagnosis or management of any of these cases; they come from the services of Drs. Willis J. Potts, Harry Boyle, Arthur Shafton and E. W. Immermann. I express my thanks to them for permitting the inclusion of their cases in this report.

I. *Functional Intestinal Obstruction.*—This condition, occurring in the newborn, presents a clinical picture of obstructive ileus, but without findings of intestinal obstruction at operation or autopsy. That this condition results from a developmental defect of the intrinsic nervous system was considered by Tittel[1] in 1901, and has been suggested repeatedly since then.[2–3] Tiffin *et al* reviewed the literature in 1940, and reported a case of chronic intestinal obstruction with megacolon in which they demonstrated the absence of nerve cells in the myenteric plexus of Auerbach, which lies between the circular and longitudinal muscle layers of the bowel. Zuelzer and Wilson[5] in 1948 made an outstanding contribution to the subject with a report of 11 cases of acute, recurrent or chronic intestinal obstruction with no mechanical cause, but with a segmental agenesis of the myenteric plexus, resulting in a disturbance of the propulsive function of the affected portion of the bowel. The acute cases of their series were clinically indistinguishable from mechanical intestinal obstruction, except for a familial tendency in some cases. The chronic cases could be differentiated from idiopathic megacolon only by their failure to respond

From the Children's Memorial Hospital, Chicago.
Presented at the Illinois State Medical Society Annual Meeting, Section on Pediatrics, at Springfield, Ill., May 24, 1950.



Figure 1a. Figure 1b.

Figure 1a. Pre-operative film showing high grade obstruction in the lower bowel.
Figure 1b. Six days after operation. Obstruction still present.

to parasympatheticomimetic drugs, and to spinal anesthesia.

The case being reported seems clinically identical with Zuelzer and Wilson's acute cases. Pathologically it differs from them in that a segmental hypogenesis instead of an agenesis of Auerbach's plexus was present.

REPORT OF A CASE

B. R., a white boy, was admitted to Children's Memorial Hospital at the age of 3 days with a diagnosis of congenital atresia of the bowel. Vomiting had started at the age of 24 hours and nothing had been retained since. He was markedly toxic and dehydrated. Temperature was 104 degrees. The abdomen was distended and tympanitic. Flat plates of the abdomen revealed many gas pockets and fluid levels, indicating a high grade or complete obstruction in the distal small bowel. (Figure 1a)

He was immediately prepared for surgery. Exploratory laparotomy disclosed a distension of the entire small bowel and the ascending and transverse colon, but no obstruction anywhere. A large rubber catheter inserted into the anus was passed up into the sigmoid colon without meeting resistance.

He was maintained on parenteral fluid for 4 days. After that he retained ⅛ to ½ of feedings given by mouth. He had an intermittent paradoxic diarrhea alternating with periods of obstipation of 4 to 5 days duration. His course was progressively downhill, and he expired 4½ weeks after surgery. (Figure 1b)

Postmorten revealed a fibrinous peritonitis, and a contracted descending and sigmoid colon filled with hard, impacted, nodular fecal masses. The bowel proximal to the splenic flexure was markedly dilated and moderately hypertrophied. There was no mechanical obstruction except that caused by the fecal impaction. Microscopically there was a marked diminution in the number of nerve cells seen in the myenteric plexus in the descending and sigmoid colon as compared to those in the transverse colon and in the ileum.

DISCUSSION

This case differs from those described by Zuelzer and Wilson only that some plexus cells were found in the affected portion of the bowel. But the stasis, inspissation of fecal matter, and impaction in this portion of the bowel with proximal dilitation and hypertrophy were identical. It seems probable that the diminished propulsive function of a section of the bowel resulting from a hypogenesis of the plexus would have this same end result as would an absence of propulsive force due to agenesis.

A search through the records of Children's Memorial Hospital for the past 10 years reveals one case almost identical to the one described with a hypogenesis of the plexus, and one case of the chronic type with the development of a megacolon. The essential findings in the acute cases of Zuelzer and Wilson's series are as follows: The clinical picture is identical with congenital atresia or stenosis of the lower ileum or large bowel. No anatomic obstruction is found at operation. Instead there is a narrowing of the affected segment which contains fecal impactions and shows no peristaltic motility. There is dilitation and hypertrophy of the colon proximal to this area, depending on the duration of the condition. In none of Zuelzer and Wilson's cases was there fibrosis of the pancreas. In one of our cases there was evidence of early fibrocystic disease.

The chronic cases occur later (2-4 months) or have an early but more gradual onset. The picture is that of recurring, incomplete obstruction, followed by the development of a megacolon. However, these cases show no response to spinal anesthesia or to parasympatheticomimetic drugs such as mecholyl or neostigmin. In "idiopathic" megacolon there is not usually a history of obstruction preceding the development of the hypertrophied and dilated bowel. Moreover, the pathogenesis of megacolon has been generally considered to consist in an imbalance in the nervous regulation of the motility of the colon, with undue preponderance of sympathetic influences. In the cases we are discussing there is instead of a physiologic imbalance, a neural defect consisting in the absence (or diminution)* of parasympathetic neurons in the intestinal

*Robertson and Kernahan[2] have reported dimuntion of, and toxic changes in, the cells of the myenteric plexus in a case of megacolon.

wall. Consequently there can be no increase in intestinal motility with the use of parasympathetic stimulating drugs, or with the sympathetic-inhibiting effect of spinal anesthesia. Tiffin, Chandler and Faber suggested that cases in which there was a myenteric agenesis might constitute a subgroup of true idiopathic megacolon. A recent report of Swenson *et al*[5-6] suggests that functional obstruction was the basis of the cases of megacolon originally described by Hirschsprung. His successful treatment of megacolon by removing the non-functioning segment of bowel distal to the megacolon is evidence for the occurrence of functional obstruction as a cause of at least some cases of megacolon. With this surgical procedure he obtained 33 cures in 34 cases, with one postoperative death.

TREATMENT

Obviously, further study will be necessary before these cases can be classified, and a satisfactory therapeutic regime outlined, at least for the acute cases. When exploratory surgery in a case with the clinical picture of obstructive ileus fails to reveal organic obstruction, the probability of myenteric plexus dysfunction must be kept in mind. Heretofore failure to find mechanical obstruction has usually been followed by closure of the abdomen with eventual death of the patient. The work of Swenson, and of Zuelzer and Wilson indicates that an enterostomy at the lowest level of normal intestinal motility should be done. Resection of the non-motile segment can be performed at the same time if practicable, or as a second stage operation. Barium should not be given by mouth in pre-operative studies because of the fecal impaction which occurs. Antibiotics should be used pre-and post-operatively because of the tendency to peritonitis.

II. *Hypertensive Encephalopathy*

D.C., a white male, 9½ years of age, was admitted to Children's Memorial Hospital on January 23, 1950 in a generalized convulsion of 3 hours duration. There was a history of frequent upper respiratory infections, the last one two weeks prior to admission, during which he developed a draining ear. Acute symptoms subsided in a few days, but the ear continued to drain. There was a history of frequent infections about the teeth of several years duration. He had had measles, mumps, chickenpox, and whooping cough.

On the day of admission he complained of headache, vertigo and blurred vision. One hour later he developed a generalized convulsion. When he entered the hospital, three hours after the onset of the convulsion, he was under partial control by ether.

On admission, temperature was 101.2 degrees, his face was puffy, but there was no dependent edema. The right ear canal was filled with pus and there were 2 draining dental fistulae. There were no signs of cardiac failure. Blood pressure was 160/110, N.P.N. was 29 mgs.%. Total protein and A-G ratio were normal. The urine was loaded with red cells; albumin was recorded as 4 plus. Obviously he had hypertensive encephalopathy as a complication of post-infectious nephritis.

He was given 5cc of 50% $MgSO_4$ intramuscular. Convulsions ceased 20 minutes later. For the next 4 days he received 2cc of 50% $MgSO_4$ three times a day and the same dose twice daily for the following 2 days. He was placed on a low salt, acid ash diet, and was given 200,000 units of penicillin daily for 6 days. During this time his blood pressure dropped gradually to 102/64, and abnormal urinary findings gradually disappeared. He was discharged 11 days after admission apparently well.

This case is presented not so much because of its rarity, (although it is not commonly seen at Children's Memorial Hospital) but because of the difficulty in distinguishing this complication of childhood nephritis from two other complications — cardiac failure and renal failure (uremia). Hypertensive encephalopathy is due to cerebral vasospasm with anoxia and edema of the brain, and so has no physiologic relation to cardiac or renal failure. Although the usual clinical points of differentiation are summarized in table I, there are frequent exceptions.† For example, cardiac or renal failure may be the first signs of post-infectious nephritis. Furthermore two or all of these complications may occur simultaneously in either acute or chronic nephritis. Laboratory studies will reveal the nature of the condition, even though it is complicated, but the confusion lies in the initial emergency procedures, which often require the most careful judgment.

From a practical standpoint it can be said that any child with nephritis who develops hypertension, with or without coma or convulsions, should have magnesium sulphate. But if there is also evidence of renal damage or cardiac failure, (both of which may cause retention of the drug) it must be given with the utmost caution. Drowsiness, slowing respiration, and rapidly dropping blood pressure are evidence of toxic reaction. 5-10cc of 5% $CaCl_2$ or 10% calcium gluconate intravenously will counteract these symptoms.

†This is not intended as a complete clinical picture of the symptoms or treatment of these complications of nephritis, but simply a listing of their differential points.

TABLE I.
THREE COMPLICATIONS OF CHILDHOOD NEPHRITIS

HYPERTENSIVE ENCEPHALOPATHY	*CARDIAC FAILURE*	*RENAL FAILURE (UREMIA)*
Occurence		
In acute nephritis (early) Rare in chronic	More common in chronic (late)	In chronic nephritis (late) Rare in acute
Onset		
First week with rapid *rise of blood pressure* (150)	Late with *rapid pulse*	Later than 2 weeks with *oliguria*
Symptoms		
Headache Upper abd. pain Nausea-vomiting Visual disturbance Transient paralysis Muscle twitching Gen. convulsions Coma	Cardiac enlargement Weak heart tones Systolic murmur Congestive failure Ven. press. 160+ Hypertension + or —	Retention N., P., etc. Acidosis Anorexia Coma (Convulsions)
Treatment		
With B.P. 110 - 120 *NPN* 30 *mg.% or less* $MgSO_4$ 50% ½ - 1 oz. tid *With B.P.* 150 *plus* $MgSO_4$ 50% 0.1cc per lb. I-M. every 4 hrs. I-M *Extremis* 100-150cc 2% $MgSO_4$ I-V.	Absolute rest Oxygen Digitalize Restrict fluids (800cc)	Maintain normal comp. and vol. of body fluids Glucose — only food $MgSO_4$ cautiously ($CaCl_2$ 5% I-V. antidote) Caudal analgesia Procaine I-V. Peritoneal irrigation?

An excellent discussion of this subject is contained in recent articles by H. H. Boyle and H. J. Hebert,[8] and by Joseph H. Calvin.[9]

III. *Spontaneous Subluxation Of The Cervical Spine.*—Fifty two cases of spontaneous subluxation of the cervical spine associated with inflammatory conditions of the tissues of the neck have been reported, almost all involving the atlanto-axial joint. Most of them occurred between the ages of 5 and 12 years. The clinical picture is superficially similar to the more common muscular torticollis, from which it must be differentiated before proper treatment can be instituted.

There is a history of an inflammatory process preceding the torticollis for several days to weeks. This is usually some form of upper respiratory tract infection, or one of its complications. The wry neck appears suddenly and spontaneously, or it may follow a minor trauma, such as a sudden turn of the head, a sneeze or cough, or a slap on the back. There is severe pain and spasm of the posterior neck muscles, and interspinous tenderness. Rarely root and cord signs appear.

The usual x-ray views often fail to reveal the dislocation, and special x-ray techniques must be employed before ruling out a cervical subluxation.[10]

The case* being reported here differs from those previously described in that this white male of 4 years, who gave a typical history and the findings of an anterior unilateral subluxation, showed on x-ray (Figure 2a and 2b) a fusion (apparently congenital) of the atlas and axis, and an anterior dislocation of the first and second cervical vertebrae on the third vertebra. To my knowledge, this is the first such case to be reported.

Treatment consists in head halter traction with the neck in hyperextension until all clinical and x-ray signs of dislocation have disappeared. This is followed by immobilization with a cervical collar or cast for several weeks. Antibiotics hasten the subsidence of the underlying infection.

*This child is a patient of Drs. Arthur Shafton and E. W. Immermann who have kindly consented to my including it in this discussion of unusual pediatric conditions. They are reporting the case in detail elsewhere.

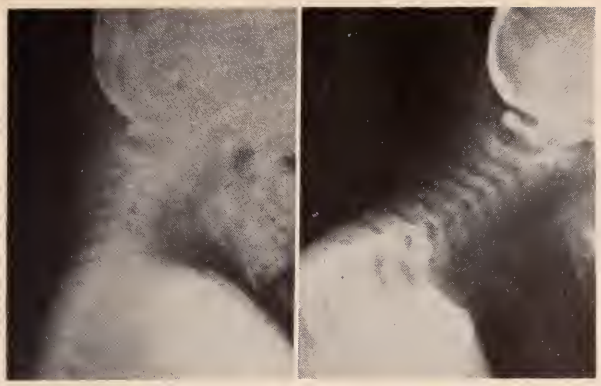


Figure 2a. Figure 2b.

Figure 2a. Anterior dislocation of the fused bodies of the first and second cervical vertebrae on the third cervical vertebra.

Figure 2b. Reduction of the dislocation after four days of halter traction.

Various theories as to the cause of cervical subluxation have been advanced. Berkheiser and Seidler[11] subscribe to Wittek's theory of metastatic effusion into the joint. Grieg,[12] Watson-Jones[13] and others advanced the theory that hyperemia caused by the infection produces a decalcification which involves the areas of ligamentous insertion resulting in relaxation of the ligaments. Hess[14] *et al* agreed that while weakening of lateral ligaments is an important factor, irritative contracture of suboccipital and paravertebral muscles is an essential part of the mechanism. Apparently some unexplained and unusual situation must also be present in these cases, since the condition is such a rare complication of the very common respiratory tract infections of children.

It is important that spontaneous subluxation be differentiated from the common form of wry neck. The former do not ordinarily go on to spontaneous cure. Failure to reduce them can lead to muscle atrophy and permanent deformity. Cord degeneration with permanent paralysis has been reported.

Considering these facts, together with the frequent difficulty of demonstrating this condition by x-ray, it would seem advisable that in any case of sudden, spontaneous torticollis associated with an upper respiratory infection, with severe pain, tenderness and muscle spasm of the upper posterior area of the neck, which does not respond to heat and antibiotics in a few days, that halter traction be employed. This procedure might make the difference between recovery, and permanent deformity or death.

IV. Congenital Esophageal Atresia With T-E Fistula.—Thirty-eight cases of esophageal atresia have been seen at the Children's Memorial Hospital in the past 4 years.** Of these, 35 had a tracheo-esophageal fistula and three did not. The cases with fistula were all of type 3, that is, a fistulous communication between the lower end of the esophagus and the trachea at or near the carina, together with atresia of the upper end of the esophagus. (Figure 3) With present surgical techniques[15] more than half of the cases were operable, and the mortality, which was 100% a few years ago, is approaching 50%. The surgical aspects of this condition do not come within the scope of this paper. We are concerned here with the role — and it is a vital one — that the pediatrist must play in cooperation with the surgeon in removing these cases from the group of hopeless congenital anomalies, and placing them with the remedial conditions of the newborn.

The clinical picture is distinctive and uniform, and is readily recognized if it is kept in mind. These infants have difficulty in breathing at birth. They have an excessive amount of mucus in the nose and throat, and the mucus constantly and rapidly reforms after it has been aspirated. There are frequent, spontaneous attacks of choking and cyanosis; even a single swallow of fluid will precipitate a violent attack. If the anomaly is type 3 (and over 90% of this series were of that type) upper abdominal distension develops early, because of the fistulous connection between the trachea and stomach.

With this picture, the diagnosis can be proved by passing a soft rubber catheter (but not so

**All of these cases have been on the service of Dr. Willis J. Potts.

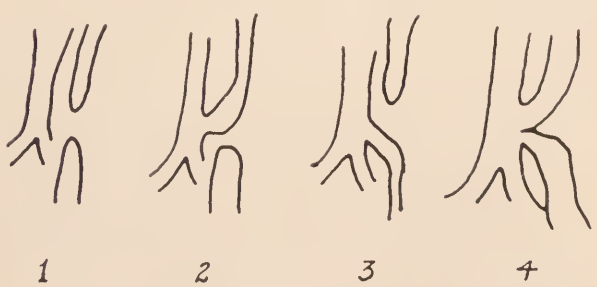


Figure 3. Possible types of congenital esophageal atresia. No cases of types II and IV were seen in this series.

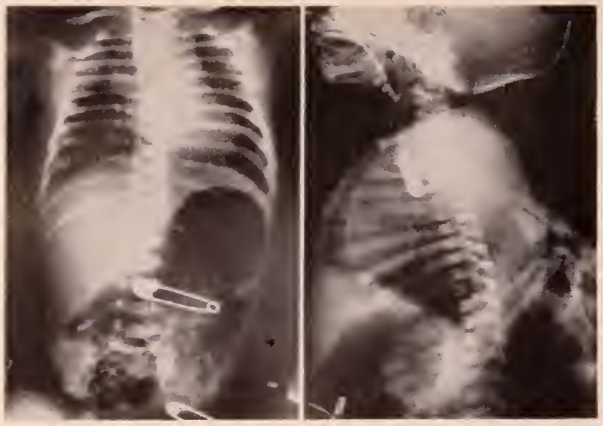


Figure 4a. Figure 4b.

Figures 4a and 4b. The blind upper end of the esophagus contains lipiodol. A fistulous tracheo-esophageal communication is indicated by the presence of air in the stomach.

soft that it will curl or kink) carefully into the upper esophagus. It will meet an obstruction within 1 or 2 inches. Two cc of lipiodol injected through the catheter will demonstrate the blind upper end on x-ray. (Figure 4a and 4b)

The high mortality in operated cases is due to several factors. Most of these infants are below average weight, and many are premature. All of our cases under five pounds died.† The frequency of other congenital anomalies (15% in this series) also affect the prognosis. The mortality varies directly with the age at operation. This is apparent since aspiration into the lungs both from above and below rapidly and almost invariably leads to pneumonia (which is often necrotic in type) and to atelectasis. Atelectasis is further aggravated by the frequent and ill-advised use of barium to visualize the anomaly, and the giving of oral fluid, much of which find their way into the tracheo-bronchial tree. Even so, the mortality in this series was between 50-60%, due to the new techniques that are being developed in chest surgery. It is obvious that proper preoperative care and preparation is vital to the surgical results. We must, therefore:

1. Recognize the symptoms as described, and make a definite diagnosis within the first few hours after birth, by means of lipiodol (not barium) introduced into the esophagus through a soft but firm rubber catheter.
2. Avoid all oral food and fluid.
3. Give parenteral fluid. Limit this to 40-50cc/lb/day, and limit saline to 15% of the total, to avoid pulmonary edema.
4. Give oxygen constantly.
5. Aspirate the pharynx gently thoroughly every half hour or more.
6. Give antibiotics in full dosage.
7. Get these infants to surgery as early as possible.**

The developing conquest of this condition by surgery is making one of the proud pages of modern medicine. It is apparent, however, that the fight will not be won without team work between the pediatrician and obstetrician, and the surgeon. If we, who see these cases first, can avoid the pre-operative hazards, we can bring to the surgeon an infant who is a much better surgical risk, and one on whom can be demonstrated to their fullest effect the brilliant new surgical techniques that are being developed.

V. A Case Of Misleading Symptoms.—A white male infant was brought to the hospital at the age of seven weeks with complaints of difficult and noisy breathing, and cough and choking since birth. X-ray at 4 days of age showed evidence of aspiration pneumonia. (Figure 5a) Full doses of penicillin and sulfonamides were given, and films taken one week later showed that the pneumonia had cleared. The baby showed no further evidence of infection, but gained and grew normally. The cough subsided, but some stridor continued. Four days prior to admission his cough recurred, and choking and noisy breathing became more marked. On admission he had a normal temperature, a normal blood count and

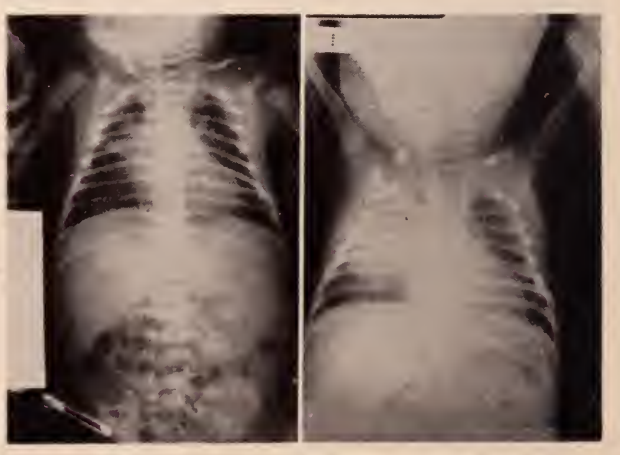


Figure 5a. Figure 5b.

Figure 5a. Pneumonitis at 4 days of age. X-ray taken 1 week later showed complete clearing.
Figure 5b. Mass found at 7 weeks of age.

†Since this was written one infant of 4 pounds and one of 4½ pounds have survived.

**The surgical management of this series is being reported by Dr. Potts

was a healthy normal baby except for his noisy breathing. X-ray at that time showed a mass which filled about one half of the right chest. (Figure 5b) It grew rapidly in the next few days. Bronchoscopic examination apparently ruled out a diagnosis of any infectious process such as a lung abscess following the pneumonia. The rapid growth of the mass was not compatible with a lung tumor. By elimination the only probable diagnosis was a cyst in the mediastinum. The most common mediastinal cyst at this age is a reduplicated esophagus. The baby was therefore prepared for operative removal of this cyst.

At operation a lung abscess about the size of a small orange was found.

Lung abscess was always the most probable cause, since it is the common complication of pneumonia. The misleading clinical picture illustrates three things: (1) Infants with infections often do not have the usual signs of infection as seen in older children and adults, such as fever, high white count, loss of weight, etc. (2) The antibiotics can mask a disease without curing it. (3) While the contemplation of unusual conditions in medicine is an interesting pursuit, we must give due prominence in our considerations to the common diseases, if we want to maintain a high diagnostic batting average.

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Diabetes Mellitus in Infants and Children

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The discovery of insulin opened new clinical vistas in the treatment of diabetes mellitus. Young girls with diabetes lived to the child-bearing age, married and became pregnant. The course of their pregnancies has been carefully studied. It has been established that good control of the diabetes is mandatory throughout pregnancy and in most cases it is desirable that substitutional hormonal therapy be prescribed. Delivery by section under spinal anaesthesia has been recommended.[1] Thirty-eight weeks is the optimum date for delivery in order to circumvent toxemia of pregnancy and at the same time avoid too early prematurity.

The newborn infant of the diabetic woman varies from the normal by the following symptoms and findings. It is usually larger, edematous and frequently icteric. Respiratory embarrassment, instability of the blood sugar, splanchnomegaly and erythroblastosis are often present.

The typical triad of symptoms of respiratory difficulty in these infants, either present at birth or developing shortly thereafter, consists of tachypnea, cyanosis and retraction of the soft parts of the chest. Occasionally, one sees a similar picture in prematures and infants of mothers with toxemias of pregnancy.

Gellis,[2] White and Pfeffer have recently determined the average volume of gastric contents of infants of diabetic mothers immediately after delivery to be about 20 cubic centimeters which is about twice the average of infants of normal women having sections and about ten times greater than infants of normal spontaneous deliveries. They advise immediate gastric aspiration by continuous suction with a number 10 soft French catheter through the oropharynx. The airway is cleared but the trachea is not catheterized. Suction is applied two or three times and oxygen is administered between suctions. The infant is placed in an incubator with oxygen at six liters per minute for three or four days. They report that aspiration has prevented development of this syndrome in the newborn of diabetic mothers.

Landau[3] et al have recently reported excellent reduction in the mortality of infants born by section by delay in clamping and cutting the umbilical cord until the vessels have collapsed and the placenta has drained. The placenta, surrounded by a towel, is clamped and elevated to facilitate drainage. This drainage is usually complete in six to ten minutes. Thus, an average transfusion of about ninety cubic centimeters is provided for these infants whom he believes are suffering from shock due to hemorrhage.

Glucose feeding for the infant is not usually necessary in the early post-natal period if the mother has had adequate management of her diabetes. However, in undiagnosed or neglected maternal diabetes, the foetal pancreas may hypertrophy and produce too much insulin for the needs of the infant, resulting in hypoglycemic reactions, convulsions and death. In these cases glucose must be prescribed in the first few hours after delivery. This histologic slide is from an infant born precipitately of a mother with undiagnosed diabetes and shows a tremendous hypertrophy of the islets of Langerhans. The infant died in convulsions about six hours after birth without medical attendance.

Diabetes mellitus in infants has been recognized since 1789 when Rolls reported the first authentic case. There have been many cases reported throughout the nineteenth and twentieth centuries. Diabetes, however, is uncommon in the first year of life. Up to 1947[4] fifty-seven cases had been recorded.

We[5] have studied six cases of diabetes mellitus in infants. Only one of the six was correctly diagnosed before admission to the hospital; the others were sent in as broncho-pneumonia, acidosis, meningitis and shock. The symptoms and findings in order of their frequency were:

Fever	100 per cent
Pulmonary signs and symptoms	100 per cent

From The Children's Memorial Hospital and The Northwestern University Medical School, Chicago, Illinois.

Read before the Illinois Medical Society, May 24, 1950. Section on Pediatrics.

Tachypnea	100 per cent
Rales and signs of pneumonia	66 per cent
Anorexia	66 per cent
Vomiting	66 per cent
Restlessness	66 per cent
Polyuria	60 per cent
Loss of weight	30 per cent

The following case report[6] is typical of the fulminating disease in infancy when accompanied by infection:

J. M., a baby girl, age ten months, was admitted to the Municipal Contagious Disease Hospital of Chicago, December 15, 1948, with a history of croup for two days associated with anorexia and fever. Oral penicillin had been given for two days. Respirations became rapid and she vomited once. She had been brought to the hospital for a possible meningitis. Birth and family histories were non-contributory.

Physical examination revealed a febrile (103 degree temperature) infant with respirations of forty-eight per minute that were deep and grunting with flaring of the ala nasae and a pulse of 160. Dullness was noted over the right lower lobe but no rales were heard. The spinal fluid was negative for cells and organisms and the protein and sugar were normal. A urine specimen, obtained the morning after admission, revealed three plus sugar, but she was receiving intravenous glucose solution at the time so the glycosuria findings were minimized. She was treated with chemotherapeutic agents for pneumonia and responded after the first twenty-four hours, but on the third hospital day she was lethargic and her breathing was still labored in spite of treatment. Fluids were discontinued and the blood sugar was subsequently found to be five hundred milligrams per cent and the urinary acetone and diacetic acid were both four plus. A urinary sugar, obtained four hours later, was still four plus.

Twenty units of regular insulin were given subcutaneously and in three hours fifteen units were administered. Five hundred cubic centimeters of one-sixth molar lactate was administered intravenously. Within twelve hours the infant responded to stimuli and the respirations were essentially normal in rate and depth. Orange juice and a weak formula were offered and accepted readily. On the eighth hospital day the child was transferred to The Children's Memorial Hospital, at which time the blood sugar was 363 milligrams per cent, the hemoglobin was 10 grams, the red blood count was 4,260,000 and the white blood count was 7,800. A six-hour feeding schedule was established. Feedings consisted of whole boiled milk, vegetable, cereal and fruit. She remained afebrile and alert and was discharged on the thirteenth hospital day. Four units of regular insulin twice daily and six units of globin insulin once daily have controlled the glycosuria. There have been no subsequent complications.

The symptoms of diabetes was masked by the pneumonia-like picture presented on admission to the hospital. In retrospect, it was possible to recognize that the hyperventilation was out of proportion to the apparent illness. The true diagnosis was suspected and established because of the persistence of hyperpnoea after the other respiratory symptoms had subsided.

The basic principles underlying the management in diabetes in infants and children are 1—education in knowledge of the disease and in the use and actions of the various insulins, 2—education in handling the diet, 3—instruction in testing of the urine, and 4—recognition and prevention of complications.

1. The parents should be informed that the initial symptoms of diabetes are due to a lack of insulin. An inadequate supply of insulin causes a depletion of liver glycogen, hyperglycemia and glycosuria. Subsequently, depletion of electrolytes, loss of weight, acidosis and coma occurs.

Insulin, therefore, is eventually required of all patients with juvenile diabetes. I can recall three patients who were able to get along fairly well for one year without insulin. One patient did maintain a normal gain in height and weight for fifteen months. Globin insulin twice daily or one of the crystalline, protamine insulin mixtures, such as the 2:1 or 2½:1 mixtures once daily, appear to give the best control of glycosuria without producing serious hypoglycemic reactions.

2. Diet. If one orders a weighed diet, the diet prescription should be adequate in protective foods, minerals and vitamins. The protein prescription should be generous. I usually recommend from three to five grams of protein per kilogram of body weight. Calories will vary from eighty to one hundred calories per kilogram of body weight in the infant and small child and from fifty to eighty in the older child. Futhermore, the child must make a normal gain in height and weight or the diet is inadequate. Often the whole family will feel the diet is a good thing for them and will follow the same diet.

The "free diet" has been advocated for almost twenty years and has gradually gained new adherents. The proponents recommend it because of simplicity, absence of hypoglycemic reactions and prevention of and improvement in psychologic maladjustments. David Allweiss[9] of Chicago and George Guest of Cincinnati[7] recommend a free diet with adjustment of insulin dose to glycosuria. Other authors[8] pay little attention

to glycosuria provided there is no wide fluctuation in weight, an absence of acetonuria and no symptoms of poor control such as pruritus and nocturia.

3. Testing of urine. Both parents, older brothers or sisters or other relatives living in the home who are responsible for the care of the diabetic child should learn to perform the Benedict's qualitative test for glucose and the ferric chloride test for aceto-acetic acid. Two convenient rapid tablet tests for glucose and acetone are now available and may be used for testing urine if care is exercised to prevent deliquescence.

4. Recognition and prevention of complications.

a. Hypoglycemia. The patient should be taught to take food at any time that he experiences increasing hunger, headache, vertigo, nausea, vomiting, nervousness or incoordination. The parents will soon recognize the pattern and time of reaction and will learn to avert severe reactions with glucose feedings. I instruct the parent in the dosage of adrenalin — three to five minims will usually liberate enough glucose from the liver so that the patient wakens and resumes oral feedings.

b. Acidosis. The parents should be cautioned that testing for sugar is important at all times and when there are signs of acute infections, diarrhea and vomiting, especially with fever, an acetone or diacetic test should be made. The appearance of actetonuria is a cause for alarm and calls for prompt additional doses of insulin. It is important that the parent be instructed in emergency six-hour prescription of food and insulin which should be followed until the emergency has passed.

SUMMARY

1. The infants of diabetic mothers show many variations from the normal. Gastric aspiration immediately after birth and delayed clamping of the umbilical cord appear to have favorably influenced the survival of these infants.

2. The symptoms and signs of infantile diabetes are discussed.

3. The principles of management of infantile and childhood diabetes are briefly outlined.

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Urological Problems in Infants and Children

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Urology in children is a specialty unto itself. It is true that congenital anomalies comprise most of the pathological conditions found. These anomalies must be diagnosed and corrected early in life before irreparable damage is done. Very few subjective findings are present. The infant does not complain of pain, frequency, burning, etc. Regurgitation of feedings, vomiting or crying on urination may be the only subjective finding. Young children usually complain of stomach ache or loss of appetite or vomiting along with pain on urination. Diurinal enuresis may be the only finding. Dribbling of urine may be the only symptom.

Objective findings are far more important in these cases, such as red blood cells or white blood cells in the urine, palpable masses in the abdomen and urinary incontinence. During the past 35 years better methods of examination of the child, more detailed preoperative and postoperative care and more specialized techniques have been developed. The diagnosis of urological conditions lagged behind the diagnoses of surgical and medical conditions in the abdomen of children. At several children's hospitals 30 years ago 10% of the autopsies revealed urinary tract pathology that was missed. This was a challenge to the pediatrician. Since then the urologist has been consulted more frequently.

The advent of I. V. or I. M. Pyelograms have been of tremendous aid to urologists. More efficient x-ray machines have also been most helpful. Instruments and methods having been developed, new standards of selecting cases for complete urological studies had to be determined. New standards of selecting symptoms or physical findings, or both, were established for recommending complete urological work-up. Pus cells in the urine — especially in the male patient; recurring attacks of pyuria; recurring attacks of unexplainable abdominal pain, especially when associated with vomiting or regurgitation of feedings but with no other symptoms or findings; hematuria — either gross or microscopic; enuresis, especially diurinal, has been more thoroughly studied from the urological standpoint. Some unusual and correctable pathology has been found. All cases where a mass is palpated in the abdomen should have in intravenous or intra muscular pyelogram done to rule out urinary tract pathology.

During these urological studies some interesting abdominal pathological findings of the urinary tract have been demonstrated. Certain x-ray findings have been demonstrated that have formulated criteria for diagnosing intra and extra urinary tract pathology. These findings are most helpful to both the urologist and the abdominal surgeon.

The urologist may be most helpful in diagnosing some abdominal conditions — he at least can say that the urinary tract is or is not involved — that the pathology is outside of the urinary tract but in the retro peritoneal space, or that the pathology is not in the retro peritoneal space but must be located in the peritoneal cavity — thus aiding the surgeon to determine the surgical approach to use.

The abdomen of infants and children is not unlike that of the adults in many respects. The gall bladder, pancreas and gastro-intestinal tract are free of some diseases more common to adults, such as cancer, ulcers, gall stones, etc. But the genito urinary tract is not so fortunate in being free of the same diseases as found in adults. The most common causes of pathology in the urinary tract are due to congenital anomalies such as anomalous blood vessels causing obstruction of the upper, middle or lower end of the ureters, lack of normal canulization of the ureters or urethra, reduplication of the kidneys and ureters, maldevelopment of the bladder and urethra, or both, such as hypospadias, extrophy of the bladder, epispadias, etc. Some of these anomalies may never cause obstruction. Others may produce obstruction later in life.

Some pathological conditions are similar to adult pathology such as tumors of the kidney, hydronephrosis, ureteral strictures, aberrant blood vessels causing hydronephrosis, bladder

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neck obstructions, and diverticuli, both congenital and acquired, to name a few common to both.

Hydronephrosis: Whether it be due to intrinsic obstruction such as strictures of the ureter or ureteral mucosal folds, or extrinsic obstruction due to aberrant blood vessels, adhesive bands or retroperitoneal tumors, to name a few of them, hydronephrosis may be easily overlooked. The symptoms may be abdominal pain without or with vomiting. Fever is usually absent. Urinalysis is usually negative unless infection is present. Leukocytosis may be present even in the absence of infection. When the urine is negative urinary tract pathology is usually discounted by the physician. Intravenous or intramuscular pyelograms should be done to determine the presence or absence of urinary tract pathology. It is important to determine where the obstruction is located. Dilatation starts behind the point of obstruction so location of the pathological lesion can be identified easily.

Reduplication of the kidneys and ureters or so-called double kidneys and ureters may be unilateral or bilateral. Due to the anatomical relation of the two ureters the ureter to the upper half of the kidney crosses the second ureter someplace along their course to the bladder. This may cause intermittent obstruction with attacks of abdominal pain — later hydronephrosis — then infection with pyelitis of the recurring type. If it is on the right side, appendicitis may be suspected when infection or pyuria are absent.

Intravenous or retrograde pyelograms will demonstrate this anomaly. The pyelogram is characteristic, showing a double kidney and ureter. When the upper half is not demonstrated the lower half shows a middle and inferior calyces only — the superior calyx being absent.

Mesenteric Cysts whether single or multiple may simulate the cystic kidney. Mesenteric cysts are usually more mobile, transmit light and have a smooth surface, whereas the congenital multilocular kidneys are not mobile, may have an irregular surface and they may or may not transmit light. Congenital polycystic kidneys do not. The congenital multilocular cystic kidney is unilateral, may transmit light — is usually present at birth. Diagnosis can be made by intravenous or retrograde pyelograms.

In the case of mesenteric cysts, the pyelograms will be normal — displacement of the cyst medially or laterally will not displace the kidney. Congenital polycystic kidneys show elongation of the calyces with wide separation of the calyces — the ureter may be displaced medially. In congenital multilocular cystic kidney the ureter is not canulized or is impervious so the ureteral catheter will not enter the kidney pelvis. A retrograde pyelogram will show a portion of the ureter but no pelvis or calyces.

The two most common tumors of the abdomen in children are tumors of the kidney and tumors of the sympathetic nervous system, the neuroblastoma sympatheticum.

Tumors of the Kidney: Unfortunately, tumors of the kidney are silent for a long time. The primary complaint is related to an enlargement of the abdomen or a firm swelling in the abdomen usually discovered by the mother while bathing or dressing the child — one mother noticed that the diaper was more difficult to put on the baby because of an enlargement of the abdomen. These kidney tumors usually occur in the first or second years of life. Neuroblastomas later. Hematuria is rarely a symptom, either grossly or microscopically, in either condition. In our series of cases pyelitis with fever has been more frequent in neuroblastomas than in kidney tumors; the pressure of the tumor on the kidney pelvis or ureter in neuroblastoma sympatheticum is the cause of the obstruction. Wilms tumors, embryomas of the kidney, renal carcinoma or sarcoma, embryonal adeno myo sarcoma, are some of the diagnoses given to this kidney tumor, depending upon the predominating type of tissue present.

WILMS TUMORS
Embryoma of kidney
Renal carcinoma
Renal sarcoma
Rhabdo myo sarcoma
Embryonal adeno myo sarcoma

Depending upon the predominating type of tissue present — is one of the most common tumors of the abdomen in childhood pathology, usually before 2 years of age. Always arises within the substance and as it grows the kidney capsule is expanded and surrounds the neoplasm for a considerable period of time before rupturing. Hematuria, either microscopic or grossly, usually does not occur. Metastases is either by invasion of the renal vein then to lungs or bone or invasion of the retro peritoneal regional lymph glands.

Pyelograms show a definite filling defect or displacement of some of the calyces — the kidney pelvis is usually displaced downward, upward or medially —

not laterally. Calcium deposits, if present, have a definite relationship to the mass and kidney pelvis or calyces being either in the same plane above or below or laterally.

Rarely is pyelitis present.

Symptoms and Findings.—Unfortunately this lesion is silent for a long time and the primary complaint is usually related to a firm swelling in one flank which is discovered by the mother while dressing or bathing the child. It is extraordinary to see how large it can become before being noticed. Routine physical examination by the physician could discover the tumor much earlier. Inspection and palpation discloses a non tender smooth mass which fills the renal fossa and may project down toward the pelvis and may extend to or beyond the midline — usually movable and has a definite smooth border.

NEUROBLASTOMA SYMPATHETICUM

Sympathico blastoma

Sarcoma of adrenal gland

The most common neoplasm of the abdominal cavity. Classified as a neurologic tumor — differentiate into sympathoblasts and sympathetic ganglion cells or the chromaffin cells of the adrenal medulla.

Displacement of the kidney laterally or upward or downward associated with pyuria is more common in neurological tumors than with Wilms Tumors. Hydro calyces due to compression on the kidney pelvis or ureter is common. The calyces are rarely invaded so filling defects are not the rule. The ureteral displacement is lateral and usually below the kidney pelvis. Calcium deposits in tumor medially to kidney — between kidney and spinal column. Mass may be irregular — nodular — fixed. Usually extends to other side, behind the aorta and vena cava.

Metastases may occur before primary tumor is palpable. Metastases on left side to skull with unilateral exophthalmia — pepper's sign. Right side to liver and either side to lung — Hutchinson sign. Calcium deposits are more apt to be present in neuroblastoma.

Anemia present in both. The more severe the anemia without gross bleeding the more serious the prognosis.

CONCLUSIONS

Certain lesions of the urinary tract in children may be overlooked if pyelography and cystography is not employed.

Further urological study is indicated when the pyelograms are not within normal limits.

Symptomatically Urogenital tract pathology frequently similates gastro intestinal tract pathology. The urogenital tract should not be overlooked in these cases in spite of negative urinalyses.

TOBACCO AND HEALTH

Almost every tobacco novice is familiar with the acute effects of nicotine poisoning,—the nausea, vomiting, abdominal cramps, diarrhea, blurring of vision, clammy perspiration and prostration of varying degree. Although amusing to the onlooker, these symptoms of ganglionic cell poisoning mean intense misery for the victim. Few people realize, however, that this passing discomfort from absorbed nicotine might often be only a feeble forerunner of more profound and fatal effects down through the years of tobacco usage. Nicotine is a powerful drug, with a characteristic action (stimulative-irritative-paralytic) on ganglion cells of the nervous system, particularly those of the involuntary or autonomic nervous system. Its action is indeed so characteristic that all other drugs exerting a similar effect are said to have a "nicotinic" action.***

There seems to be an abundance of hints of biologic damage from tobacco smoking in both men and women. For many the habit is a difficult one to break, hence the importance of steps to prevent its beginning. This will be difficult, so long as it is considered the mark of the blasé and sophisticated individual. Nor will it be easy to discourage smoking among children when their mothers habitually indulge. Precept is never so potent as example in child-rearing. *Excerpt: Tobacco Smoking: Some Hints of Its Biologic Hazards, Clarence A. Mills, M.D., Cincinnati, The Ohio State M.J., Dec. 1951.*

A New (Sublingual) Method for Controlling The Pain of Migraine and Other Headaches

(Preliminary Report)

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Migraine, in our opinion, is an allergic entity, usually hereditary, characterized by periodic unilateral headaches, with complete freedom between attacks. It is often preceded by an aura (most often visual) and associated with nausea, with or without vomiting.

Over the past ten or more years we have been able to prevent attacks of migraine headaches in a large number of patients. This we have accomplished by careful detective work, which includes a detailed history and elimination of certain foods. We have deliberately brought on attacks by feeding milk, wheat, egg or other foods to these patients. In those patients who develop migraine shortly after a feeding test, no further treatment is necessary except for absolute avoidance of the particular offending food or foods.

The causative food cannot always be found and migraine results. For this reason it may be necessary to relieve headaches as they occur.

In a recent article R. W. McNealy[1] showed the great value of a new analgesic combination for routine use in the control of pain. The combination consisted of acetylsalicylic acid and benzosulfimide (saccharin).* The tablet being palatable is allowed to dissolve and be absorbed from under the tongue and buccal mucosa or in the mouth. McNealy states: "The results obtained following sublingual administration of this compound have been very dramatic, so much so that it can be concluded that such results could hardly have been produced so rapidly if the salicylate mixture had had to reach the blood stream by the intestino-portal pathway. We have felt that this combination reaches the blood stream by direct absorption from the sublingual, buccal and pharyngeal walls, thus short-circuiting the much longer intestino-portal route. The rapid effect may be similar to the instantaneous effects produced by sublingual administration of nitroglycerin. It has been suggested that acetylsalicylic acid in the blood stream is responsible for the more rapid analgesic effect." The new compound and technique can supplant in many instances the use of narcotics.

We are now using this sublingual or oral method to control the pain of migraine and other headaches. We have tried two different compounds:

Compound I (Theryl plus an ergot derivative)	
Ergotamine Tartrate	1 mg.
Acetylsalicylic Acid (Aspirin)	3 gr.
Caffeine	1 gr.
Saccharin	0.20 gr.
Compound II (Theryl)	
Acetylsalicylic Acid (Aspirin-Saccharin)	5 gr.

The patients have been instructed to place a tablet of either Compound I or Compound II under the tongue or in the mouth. Early in our studies, four patients complained of soreness at the point where the tablet lay under the tongue. Since then, the patients were instructed to move the tablet from one side to the other, or allow it to dissolve and be absorbed from anywhere in the mouth. In some instances the patient was instructed to take more than one tablet for the same attack.

The tablets have now been tried on 15 patients. The ergotamine-aspirin-caffeine combination (No. 1) was used for attacks of migraine by 6 patients, with prompt and excellent relief from the pain in 4 cases. In addition, relief was ob-

*Theryl is the trade name of the above combination and was furnished by the Church Chemical Corporation of Chicago, Illinois.

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tained in two of six other patients who had headaches but in whom the diagnosis of true migraine was doubtful.

The sublingual administration of Compound II (Theryl) gave quick and efficient relief in 4 of 9 patients who had ordinary non-migrainous headaches.

It is relatively easy to appraise the value of a procedure in true migraine. The patient either gets relief or does not. In ordinary headaches, however, especially in those associated with neurosis, it is difficult to evaluate any medication or procedure. One cannot entirely eliminate the suggestion factor.

Nevertheless, we now have a means of giving quick relief for the pain of migraine. The new Compound I combination appears to be a good one; relief in 4 of 6 patients was much faster than has been obtained by any other method except by hypodermic administration of an ergot derivative. In our hands no other oral medication has been as effective in dulling and relieving pain. When nausea and vomiting occur during migraine, swallowing anything aggravates the symptoms. The sublingual method apparently does not increase nausea.

CASE REPORTS

Case 1. Mrs. F. L., 42, attacks of migraine since girlhood. These often begin with flashes of light in front of one eye, with blurring, zig-zag feeling and vertigo. This is followed by a one-sided throbbing headache, quickly followed by nausea and usually by vomiting. Patient feels fine between attacks. By elimination of certain foods and by deliberately feeding one food at a time, wheat was proved to be the cause of her headaches. In the ensuing months she has been free from headaches except on four occasions when, by error or negligence, she ate wheat-containing foods. On three of these four occasions, the prompt sublingual use of Compound I gave excellent relief within 30 minutes. One very severe attack was not relieved.

Case 2. Mrs. H. S., 53, migraine attacks for 33 years. Despite a careful history and dietary instructions, the causative food has not been discovered. One severe attack was almost completely relieved within two hours after a sublingual administration of tablet No. 1. Because of soreness of the tongue at the point of contact, the patient decided to quit further investigation and to continue to rely on hypodermic injections of ergotamine tartrate, which gave relief in about two hours.

Case 3. Mrs. J. T., 27, has had typical migraine for about 5 years, with "wave lengths" and blurring of vision, followed by severe pain over one temple or the other. This was followed in turn by nausea, with or without vomiting. Attacks averaged about 24 hours, and there were no headaches between spells. This patient is still under an allergy survey. In the meantime, she has had dramatic relief from several of her attacks by the No. 1 combination which was allowed to dissolve and be absorbed from the mouth.

SUMMARY

This preliminary report indicates that sublingual medication offers a new approach to the rapid relief of headaches, especially migraine. We are continuing our observations, and we hope that other clinicians will try these two compounds on patients with migraine and non-migrainous headaches.

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Electrocardiographic Abnormalities in the Mentally Ill Is "Myocardial Damage" Sometimes of Psychogenic Origin?

Samuel G. Plice, M.D.
Charles W. Pfister, M.D.
Chicago

We believe that all psychiatrists who use electroshock therapy pay some attention to the cardiovascular system of their patients. It seems like common sense to evaluate the circulatory system before subjecting it to an apparent severe strain.

The first question that comes to mind, therefore, is what does electroshock do to the heart and blood vessels? It is generally believed that the pulse rate and blood pressure uniformly show an enormous increase. It is well known that experimental electric shock in animals and man may produce serious cardiac arrhythmias[1,2]. We are not certain that shock therapy may not produce reflex vagal stimulation of the heart with decreased rate and even asystole. If death does result from electroshock it must be from reflex vagal action on the pacemakers or from exhaustion of the heart due to tachycardia resulting from excessive sympathetic stimulation.

From the stand-point of practical experience, over one thousand cases have been treated with electroshock therapy in the Neuro-psychiatric unit at Loretto Hospital. Some of these patients have had serious organic heart disease[3] ranging from healed myocardial infarctions through ventricular hypertrophy and coronary insufficiency; many must have had subclinical coronary arteriosclerosis. Many would have been considered poor surgical risks, yet all survived electroshock therapy and many were greatly benefited thereby.

Where cardiac consultation is not available, great reliance is placed upon the electrocardiogram as a shortcut to an appraisal of the cardiovascular system. Indeed, in many cases, neither a satisfactory history nor physical examination can be obtained. Hence, some patients are denied the benefit of treatment on the basis of an unfavorable electrocardiographic report. Since we are not sure what causes death under this treatment, it is difficult to be dogmatic about cardiac contra-indications.

Early in our experience, we were greatly disturbed by the large number of electrocardiographic abnormalities encountered. We are very sure that they far out number the changes found in any similar group of patients evaluated for surgical risk.

At first, we were extremely conservative about approving treatment in the presence of T wave changes that seemed to indicate myocardial disease. It has been previously pointed out that non-specific changes should be interpreted cautiously in the presence of mental disease.[4] In several of the patients in our series, the psychiatric situation outweighed the theoretical cardiac condition and electroshock was administered uneventfully. Some of these cases have been previously reported by Kaplan and Freund.[3] It, therefore, becomes clear that patients should not be denied treatment merely because of the presence of non-specific electrocardiographic changes.

It is hence vital to remember that electrocardiographic changes may be extra-cardiac as well as cardiac in origin. Besides organic heart disease, changes in the T wave and S-T sector may be produced by changes in the electrolyte pattern of the blood, [5,6,7,8] foods and drugs, [9,10,11,12] acute and chronic infections,[8] endocrine disorders, [13,14] avitaminosis, [15] and many others. [16,17,18,19,20,21]

Read before the Illinois State Psychiatric Society on April 6, 1950.

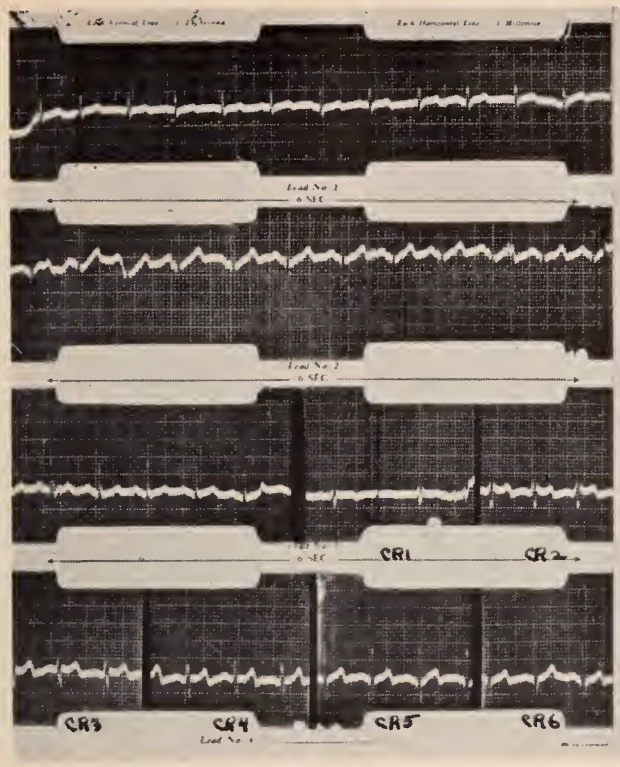


Figure 1. A. Before Electro-shock therapy. (6347)

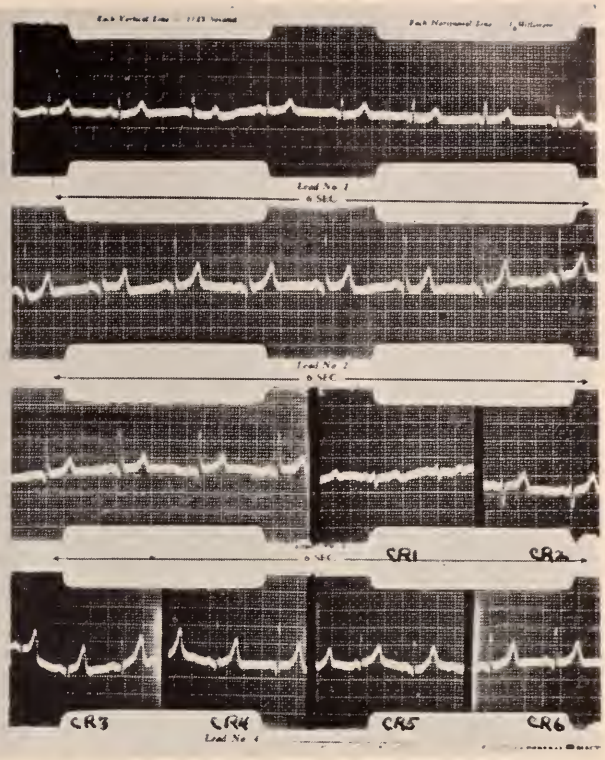


Figure 1. B. After electro-shock therapy. (6347)

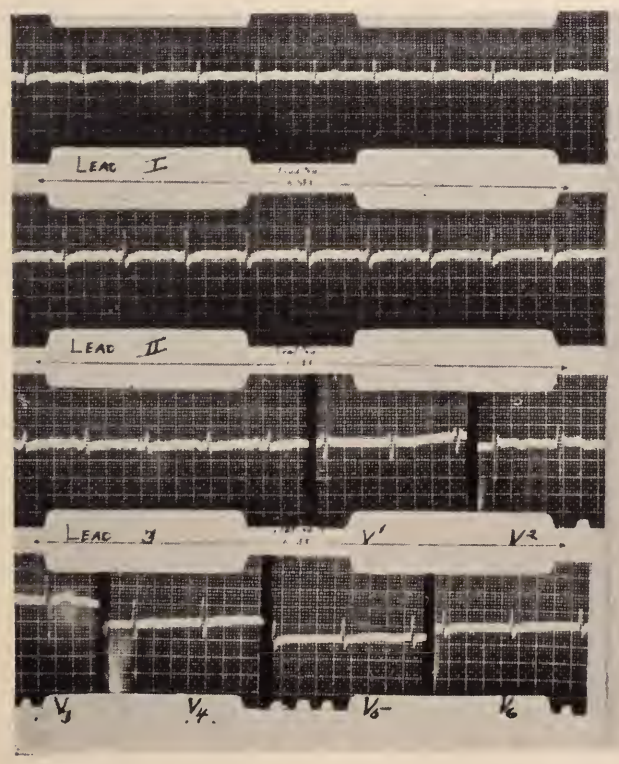


Figure 1. C. Before electro-shock therapy. (6767)

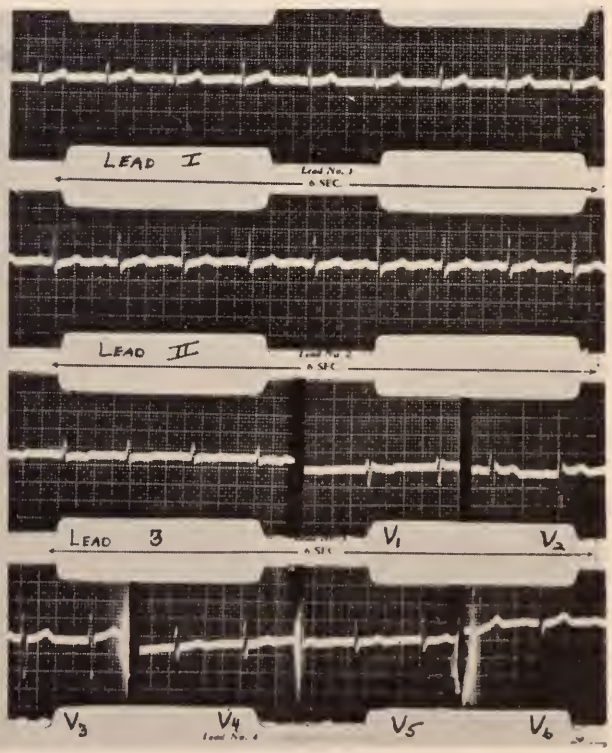


Figure 1. D. After electro-shock therapy. (6767)

It is less well known that autonomic imbalance, [10,11,22], and the psychoses, [5,14,22,23] influence the electrocardiogram; and in this relation, it has been shown that vagotonia often results in tall T waves, while sympathicotonia often results in low, diphasic, or inverted T waves[24]. Acidosis mimics the vagal T waves, while alkalosis mimics the sympathicotonic T waves.[5]

We have shown time and time again that flat, diphasic, or inverted T waves, and depressed S-T sectors have become normal after electroshock therapy. Cases 6347 and 6767, (Figure 1) demonstrate adequately the reversion to normal of this type S-T sector and T wave change after successful psychiatric improvement following electroshock therapy. However, there was no necessary correlation between psychiatric and electrocardiographic improvement in our series of 50 cases.

(Table 1)

ELECTROCARDIOGRAPHIC CHANGES		BEFORE ESH	AFTER ESH
RATE	(Unchanged	27	27
	(Faster	11	12
	(Slower	12	11
PR INTERVAL	(Unchanged	45	45
	(Prolonged	2	3
	(Decreased	3	2
T WAVE LEAD I	(Less Than 0.5mm	16	4*#
	(Diphasic	4	3*#
	(Inverted	4	3*
Depressed ST-J Leads I, II		9	2*#
Diphasic Precordial T Waves	(CR	7	1*
	(V	6	4*#
Low Precordial T Waves	(CR	6	1#
	(V	8	2*#
Depressed Precordial ST-J	(CR	7	0
	(V	4	0
Inverted Precordial T Waves		5	2*
Auricular Fibrillation		1	1*

*19 Electrocardiograms were abnormal before electroshock and were unchanged.
5 of these were due to organic lesions.
7 Electrocardiograms became abnormal after electroshock.

Table 1 outlines in graphic form the major deviations from normal encountered in our study. Low T waves in Lead I were found in 16 cases, but these had returned to normal in 12 after treatment. Low T waves were also found in Lead II in 4 cases, and all returned to normal. Of 5 cases with inverted T waves in Leads I, II only 2 returned to normal (the other 3 were abnormal for organic reasons). Seven of nine cases with depressed S-T sectors in Leads I, II returned to normal after treatment. Diphasic T waves in the precordial leads were found to have returned to normal in 8 of 13 patients. Likewise, 11 of 14 with abnormally low T waves in the precordial leads. Inverted T waves in the precordial leads returned to normal in 3 of 5 cases.

A case very much in point for this discussion is 9104, a 55 year old white female who developed active psychosis in another city. She was studied by psychiatrists who advised electroconvulsive therapy. The only physical abnormalities were, a blood pressure which varied from 200/80 to 120/80, and an apicalsystolic murmur. The electrocardiogram was strikingly abnormal and cardiac consultant advised against treatment on that basis. The patient was later studied at our institution where identical electrocardiograms were obtained. After due consideration of the electrocardiograms and correlation with the physical findings, nine electroshock treatments were given (all uneventfully). The patient was much improved on discharge — the paranoia and depression dispelled, and the electrocardiograms which had revealed symmetrically inverted T waves in the standard leads and in V5 and 6 had returned to normal. Figure 2.

It is evident from our data that the electrocardiograms of a large number of psychiatric patients are abnormal. The noted abnormalities have no organic explanation because the majority are notably absent from electrocardiograms recorded after treatment by electroshock therapy. Other authors [3,14,25] have shown that transient abnormalities occur in the electrocardiograms of psychiatric or other disturbed patients. Winton and Wallace[25] have described 6 patients of a series of 76 who returned after therapy, and exhibited electrocardiographic improvement. It seems fair to assume that the abnormal electrocardiograms must have been in some way related to the disturbed mental state, because they are otherwise unexplainable. We believe that the T wave and S-T sector changes described are mediated through autonomic nervous system imbalance.

CONCLUSION

Electrocardiograms have been made on over 1,000 patients prior to electroconvulsive therapy. Many were abnormal and suggested "myocardial damage" but the changes could have been caused by systemic disorders; metabolic, nutritional, or

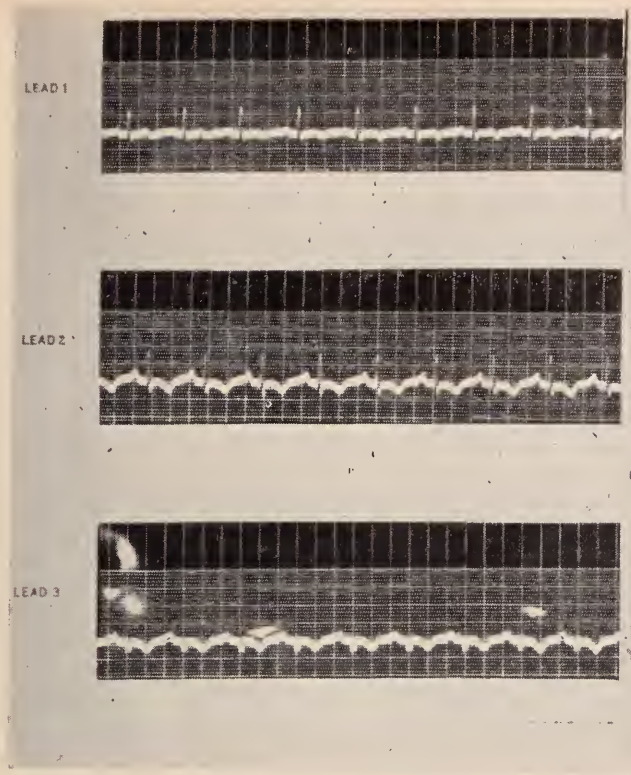


Figure 2. A. Standard leads before electro-shock therapy. (9104)

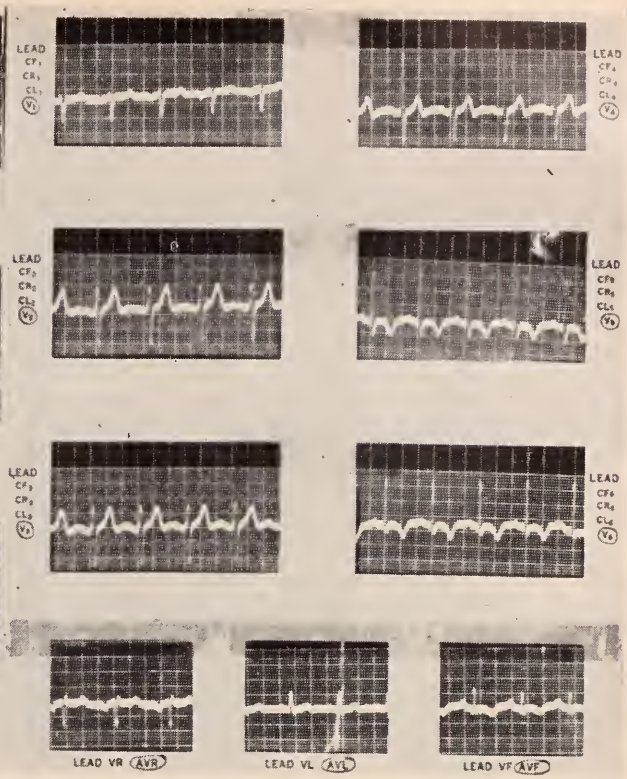


Figure 2. B. Unipolar precordial leads before electro-shock therapy. (9104)

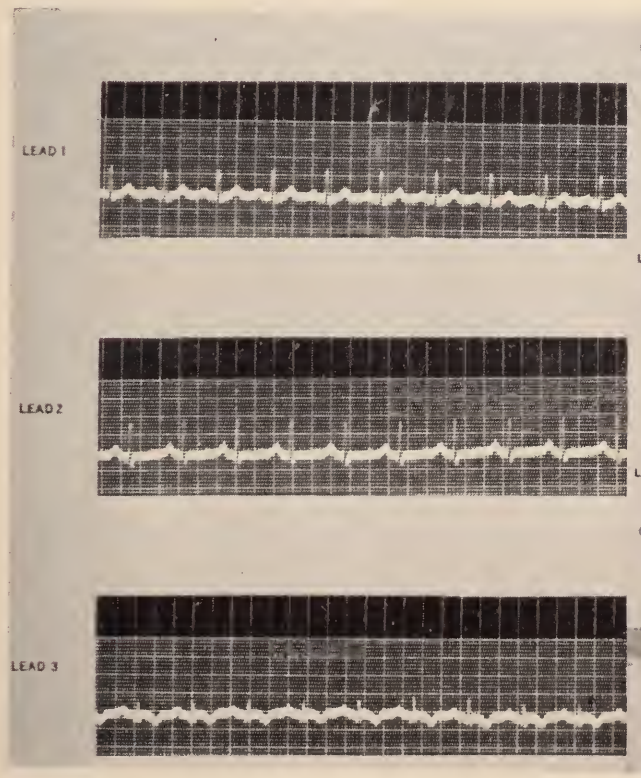


Figure 2. C. Standard leads after electro shock therapy. (9104)

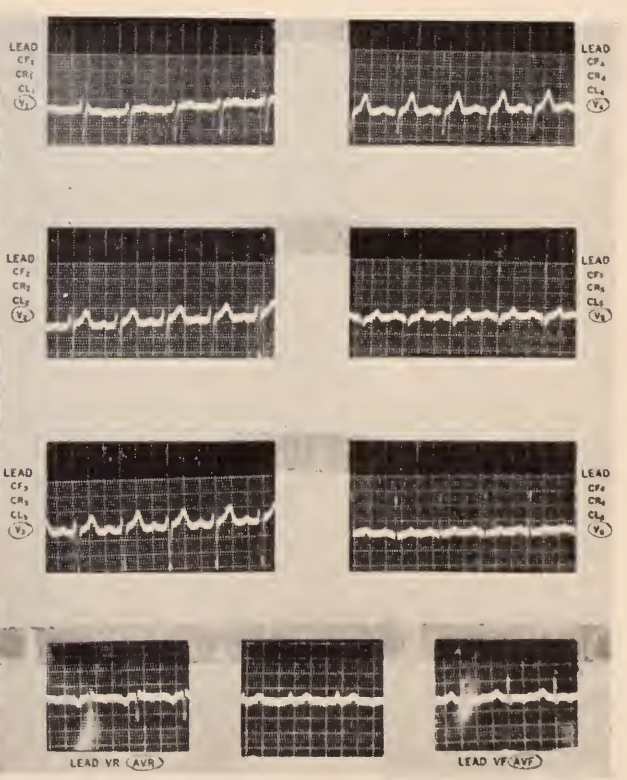


Figure 2. D. Unipolar precordial leads after lectro-shock therapy. (9104)

neurogenic. Fifty cases of this type (showing unexplained electrocardiographic abnormality) were studied after electroshock, and in many, the electrocardiograms were found to be normal.

DISCUSSION

Dr. Joseph A. Luhan.—Drs. Plice and Pfister have lucidly discussed the issue of the place of the electrocardiogram in evaluating circulatory risks in connection with proposed electro-convulsive therapy and indicate a need for reexamination of the electrocardiographic criteria of myocardial damage in mentally ill persons. This aspect of their contribution needs wider recognition by cardiologists generally than by psychiatrists who are daily employing the shock therapies.

Some years ago Dr. Madden and I began to treat outpatients by means of electroshock therapy at Loretto Hospital, and utilized the physiotherapy department for our exploits. There was a time when Dr. Plice's footsteps, figuratively speaking, sounded ominously like the thud of a flatfoot on his beat intent on weeding out these miscreants who threw patients into convulsions on the same tables used for the peaceful recording of heart rhythms: but in the course of the years these footsteps became lighter and we came to look upon their possessor as a gentleman and friendly, understanding protector indeed.

We do not inend to part company with the cardiologist, as the present day trend would seem to indicate. I believe the pendulum has swung too far, from the earlier attitudes of overcautiousness to the rash attitude of let the cardiologist and his fallible tool of electrocardiography be gone. It has been said, with some truth, that the electrocardiogram cannot predict fatal outcome of electroconlusive therapy on the one hand, and on the other hand its dire warnings have been groundless. Perhaps we could well do without the routine use of the electrocardiogram as a screening technique, but in older individuals there are frequent instances where we need the services or the knowledge possessed by the cardiologist, and what cardiologist functions without the electrocardiogram where this is readily available?

It would be foolish to assume that there is no circulatory risk to electroshock treatment. All of us employing this method extensively have encountered alarming reactions, particularly from cardiac arrest, and we are interested in anticipating and preventing such complications. It must be remembered that a patient may have a normal electrocardiogram and still have serious cardiac disease; even with coronary occlusion it may be many hours before the characteristic electrocardiographic changes occur. However, I feel certain that if the first two of three cases of fatal outcome of electroconvlusive therapy reported in an excellent pathologic study by Jetter in 1944 had adequate cardiac study before treatment, the extreme hazardousness of such therapy would have been revealed. It is interesting that in these deaths and in that of an elderly patient reported by Hejtmancik and his coworkers last year, the fatal issue took place only after a number of treatments had previously been given to each of these patients without incident.

If you will look into the literature, a number of sudden, apparently circulatory, deaths from electroshock therapy occurred in individuals receiving curare or d-tubo-curarine, and I do not believe that the association was merely fortuitous. In our early experiences at Loretto Hospital the closet approaches to sudden death following electroshock treatment occurred in patients who had been given curare.

The practical value of this paper, then, is to point out that electrocardiographic abnormalities occur with unusual frequency in mentally ill patients, and particularly that T wave and S-T sector changes in these individuals may not be indicative of intrinsic myocardial damage.

The other very significant contribution of this study is in the sphere of psychosomatic medicine. Psychosomatic medicine, like television stocks, is now enjoying a bull market, and all sorts of explanations, even that penis envy may in some way crop up in the guise of arthritis deformans, are given awesome credence. Now I cannot understand how a depressive trend, for example, could be simply translated into a detour of the electrical impulses thru the heart, although it is conceivable that the same metabolic influences which abet the efflorescence of a psychosis also act to alter the electrical impulses associated with the beating of the heart: but practically there are reversible changes in the electrocardiogram associated with mental illness that electrocardiographers have been wont to call myocardial damage, which can be rather picturesquely and loosely referred to as "psychogenic," for ordinary purposes of electrocardiographic interpretation. We cannot predetermine the so-called psychogenic origin of such non-specific electrocardiographic deviations, but their occurrence should make cardiologists interpret heart tracings of mentally ill persons with greater latitude than heretofore. There are still specific constellations of electrocardiographic changes which remain as valid as ever in revealing otherwise unsuspected myocardial damage and in placing the psychiatrist on his guard against fatal outcome from treatment.

Drs. Plice and Pfister have performed a good service for psychiatry, an inseparable segment of medicine.

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PROGNOSIS OF RECTAL CANCER

When a diagnosis of cancer of the rectum is established what is the prognosis as to longevity? In any large series a five year "cure" in 50 per cent is the usual result. Patients with glandular metastasis are usually quite well for about two years then experience a recurrence either locally or in the liver. However, 30 per cent of these will be living and well at the end of five years. Sixty per cent of those without demonstrable lymph-node metastasis will be well and happy at the end of five years. *Excerpt: The Rectum and Anus, O. C. Gass, M.D., Chattanooga, Tenn., J. Tenn. S. M. A., Jan. 1951.*

The school bell must ring each term for butcher and baker, for doctor and lawyer. He who does not constantly enrich his mind with new knowledge may find eventually that his capacity for forgetting will leave little of value behind. And no dog, however old, need ever say that he can learn no new tricks. The doctor, wherever his path may lie, can still emulate to some degree Chaucer's clerk of Oxenford, for "—gladly wolde he lerne, and gladly teche." Ed., The New England J. Med., November 9, 1950.

The cause of the high prevalence of tuberculosis in mental hospitals is failure to recognize or seek out cases of tuberculosis among incoming patients who then transmit the disease to other patients during residence in the hospital. The situation can be improved only by segregating and treating the tuberculous patients discovered by survey. Waldo R. Oechsli, M.D., Pub. Health Rep., Jan. 7, 1949.

Sarcoidosis

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Cooperating Departments
of
The University of Illinois
Edited by:
Max Samter, M.D.
William R. Best, M.D.

Dr. Bloch: "Sarcoidosis", in my opinion, is the only correct term for this disease of many manifestations. The skin lesions have been referred to as "Boeck's Sarcoid" by the dermatologists, while additional terms have been attached to ocular, pulmonary, osseous, and other aspects of this disease. At least twenty-eight different names have been applied to variants of sarcoidosis. There is no reason to consider them as separate entities. In respect to its multiple manifestations, it is analogous to syphilis and lupus erythematosus. As a matter of fact, it has only been in the past ten or fifteen years that we have realized how general the involvement of sarcoidosis usually is. It may affect any tissue of the body.

I shall not dwell at length on the ever present controversy as to whether or not sarcoidosis is a special type of tuberculous infection. Histologically, except for the absence of necrosis, it is identical to tuberculosis. Eighty to ninety per cent of the patients not only do not react to tuberculin in high concentrations but actually appear to be refractory to it. There are fanatics in both camps, those for and those against the tuberculous etiology of sarcoidosis.

We have seen many cases of sarcoidosis at Billings Hospital probably because referring physicians are aware of our interest in this condition. We have been impressed with the fact that one cannot judge the clinical significance and pathologic outcome in this disease unless one observes many cases over a very prolonged period. One to three years of observation is inadequate. A few of our patients have been followed for twenty years or more. It is evident from observation on these long-standing cases that sarcoidosis is not the benign disease it was once thought. Over a period of time considerable fibrotic tissue forms in the lungs resulting in emphysema, cor pulmonale, and finally death. There are several possible courses which an early case of sarcoidosis may pursue:

1. It may disappear entirely without leaving a trace, although this is a very rare occurrence, the possibility is a comfort to those afflicted.

2. It may progress to pulmonary fibrosis and death.

3. It may involve vital tissues and cause functional disability. As an example of this, we have seen diabetes insipidus secondary to sarcoid involvement of the hypothalamus, and internal hydrocephalus due to blocking of the choroid plexus.

It appears that patients with sarcoidosis have a higher incidence of tuberculosis than the general population. There is no proof, however, that these conditions are etiologically related. We feel that slowly progressive, senile, hematogenous tuberculosis may constitute a missing link between these two conditions. We have seen three cases of this syndrome all of whom have died from pulmonary fibrosis with chronic cor pulmonale. Tuberculosis per se was not the lethal factor.

The most characteristic lesions are those of the lungs. Early in the disease hilar lymph node enlargement may be the only manifestation. These lymph nodes may or may not later regress. Generalized miliary stipling with or without early fibrosis is next seen on the chest film showing a butterfly distribution bilaterally throughout the periphery of the mid-lung fields. This may decrease to a certain extent, stay at the same level for prolonged periods, or progress to more severe fibrosis. Less frequently sarcoid has been seen to involve almost any of possible anatomic sites.

One-third to one-half of all cases have eye involvement. This is often mistakenly diagnosed as tuberculosis of the eye. About one-third of the cases have skin manifestations. There is a higher incidence of skin lesions in the negro than in caucasian races. About 15 per cent have involvement of the digital bones. The classical lesions are cystic in nature, but we have also observed a trabeculated appearance and fraying of the bony ends in more advanced cases. Sarcoid involvement of the naso-pharynx is common. This leads often to a diagnosis of hypertrophic rhinitis or pharyngitis. Biopsy will prove sarcoid involvement.

In order to investigate the anergy to tuberculin found in sarcoidosis we conducted a series of studies on patients who gave positive skin reactions to tuberculin. These patients will react to intradermal injection mixed with saline or with serum from normal individuals, from patients suffering from tuberculosis or from tuberculosis combined with sarcoidosis. If tuberculin, on the other hand, is mixed with serum from tuberculin refractory patients with sarcoidosis, we have observed a marked diminution in the response of our positive reactors. I would like to state, however, that, although the majority of tests were consistent, we have seen a sufficient number of exceptions to discard this method as a reliable diagnostic test.

In studying our cases of sarcoidosis we have had considerable experience with the Kveim test. This test was first described about eight years ago in Norway. Sterile sarcoid tissue is ground up and injected intracutaneously. After six weeks or more, a nodule arises at the sight of injection. On biopsy this will reveal the typical histological picture of sarcoidosis if the patient has this disease. If this test is negative, it does not prove that the patient does not have sarcoid; but if it is positive, we consider it definite proof of the diagnosis. We have never had a positive reaction in people not known or suspected of having sarcoidosis. We have now done the test on about 150 subjects. Formerly, the diagnosis could only be established on autopsy or biopsy. Now we feel that if multiple clinical manifestations including pulmonary involvement are present and if the Kveim test is positive, the diagnosis is assured. Any diffuse pulmonary infiltration which roentgenologically might be compatible with sarcoidosis, tuberculosis, pneumoconiosis, or berylliosis, should be given a Kveim test. If it is positive, we feel the diagnosis may be safely assumed. Several cases of pulmonary disease thus diagnosed as sarcoidosis could be proved by autopsy or thoracotomy later on.

It is worth mentioning here that the Kveim reagent loses its activity if passed through a Seitz filter. Regarding therapy, everything has been tried, including X-ray, urethane, ACTH, Cortisone and nitrogen mustard, but no lasting effects could be demonstrated. In other words there is no satisfactory treatment.

In summary, this is a protean and serious disease, the diagnosis of which may be established on demonstrating a positive Kveim reaction. The etiology is unknown and we must keep an open mind regarding possible causes. It is plausible to consider the possibilities of airborne diseases by the tubercle bacillus or some virus, but we have as yet insufficient evidence to prove either of these possibilities. Treatment is unsatisfactory.

Dr. R. A. Chapman, Resident in Medicine: Is there any etiologic relationship between sarcoidosis and berylliosis?

Dr. Bloch: It has been suggested that these diseases might be related, but histologically they are entirely different. Therefore, despite roentgen similarities, I believe they are separate entities.

Dr. R. M. Kark, Professor of Medicine: It has been reported that splenic extracts are a satisfactory material for the Kveim test. Would you care to comment on the usefulness of such extracts for diagnostic purposes?

Dr. Bloch: On the basis of our experience, I do not feel that splenic extracts are satisfactory for the Kveim test.

Dr. Max Samter, Assistant Professor of Medicine: How frequently do you see sarcoidosis without pulmonary involvement?

Dr. Bloch: I have never seen a proven case of sarcoidosis which at one time or another did not involve the lungs.

CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Carcinoma of the Breast Masked by Non-Puerperal Abscess

Eugene F. Dolehide, M.D., and John W. Tope, M.D.
Chicago

The following case is reported because it illustrates some of the difficulties that may be encountered in the clinical and pathologic differential diagnosis of carcinoma of the breast, and because of the infrequency with which we have noted the association of breast cancer and non-puerperal inflammatory disease of the breast.

Mrs. A. K., a 74 year old white widow was admitted directly to a surgical ward on May 8, 1950, complaining of drainage from her left breast and stating that redness, swelling and pain had first appeared there three weeks earlier. She had applied "bread and milk" poultices; the abscess had ruptured on the day prior to admission. About two years before this admission the patient had been struck on the left breast by a falling folding-bed, following which accident the nipple had discharged a milky fluid off and on for several months. The latter symptom had drawn her attention to a small, non-tender lump lateral to the left nipple which she thought had slowly enlarged in the interval. She had not previously consulted a physician for her breast complaints.

The onset of the menses had been at age 14; she had had one normal pregnancy and delivery, following which she had lactated for one month. Her last menstrual period had been at age 53. She had lost about 40 pounds in the year just passed. The family history, past history and systemic inventory were considered to be non-contributory otherwise.

The patient was a well-developed, well-nourished, white female looking to be the stated age. Her blood pressure was 130/70, pulse 78, respirations 20 and temperature 98.6 degrees. The left breast was large, flaccid and pendulous, but reasonably symmetric with the right. A sinus opening was present just medial to the nipple, from which a small amount of seropurulent fluid was escaping. The skin cover-

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ing the dependant portion of the breast was red and edematous; in the infra-mammary fold it was excoriated, with minute breaks in the continuity. Beneath the areola was a firm, questionably fluctuant mass. A few soft, discrete axillary nodes were palpated in each axilla.

On the day following admission the abscess was incised and drained; other treatment included penicillin and hot wet dressings. The pus contained non-hemolytic streptococci in pure culture; a biopsy taken from the abscess wall revealed no findings incompatible with the diagnosis of abscess. None of the examiners was able to feel the lump that the patient had described as previously noted in that breast, even though the swelling subsided rapidly. Two weeks after admission, with slight serious drainage still present, she was discharged from the hospital to be followed in the Breast Tumor Clinic.

Six weeks after her hospital admission it was noted that the abscess had healed, and the examiner did not feel any lump in the breast except what he took to be the residuum of the inflammatory process. Nine weeks later it was noted that the scar was still red, and that below it there was an eczematoid area which seemed responsible for downward tilting of the nipple. A 2 cm. in diameter, deeply buried but freely movable, non-tender, firm lump was felt just lateral to the areola. No signs of fixation to skin or fascia were noted, although one small firm axillary node was palpable. The patient stated that this was the lump previously felt by her, and which we had been unable to feel during or after her hospital stay.

She was re-admitted to the hospital on July 16, 1950. Skeletal X-Ray survey for possible bony metastases was negative. At excision biopsy on July 18 a moderately firm, completely encapsulated mass, 1.5 cm. in diameter, was removed with the surrounding breast tissue. The tumor cut without grating, the cut surfaces bulged slightly and were uniformly white-gray in color. The diagnosis made on the gross specimen by the hospital surgical pathologist was low grade inflammatory change in a localized area of fibro-cystic disease, and no frozen section was made. The patient was discharged on the following day. Examination of the paraffin-fixed sections revealed a low-grade, mucus-producing adenocarcinoma. We had considerable difficulty in reaching the patient by phone, and she did not return to the hospital until August 12, 1950. Total simple mastectomy was performed on August 15th. The post-operative course was uneventful, the incision healed per primam, and a full course of X-Ray treatment to the area from which the breast was removed, the axilla and the supra-clavicular space was commenced on the tenth post-operative day.

Simple mastectomy was selected because of the association with inflammatory disease, the long interval between biopsy and definitive treatment, and the age of the patient. We have observed rather uniformly poor results with radical mastectomy following other surgery on the breast by more than a few days. The error in gross pathologic diagnosis was the first noted by us in a series of 179 consecutive cases submitted to biopsy.

NEWS OF THE STATE



ADAMS

Society News.—Dr. Francis X. Paletta, St. Louis, discussed "Plastic Surgery Procedures" before the Adams County Medical Society, February 12, in Quincy.

Medical Bulletin Resumes Publication.—With the February issue, the Quincy Medical Bulletin resumed publication after suspended publication of nearly a year and a half. Dr. Hilliard Shair, Quincy, is the new editor. The Bulletin was established in February, 1924, and appeared regularly except July and August until September, 1949. Dr. Shair is the eighth editor during this period.

Society Election.—Dr. Kent Barber was chosen president-elect of the Adams County Medical Society recently. Dr. Walter Stevenson, Jr. was inducted into the office of president. Other officers are Dr. Guy Tourney, first vice president; Dr. Carl Pfeiffer, second vice president; Dr. Newton DuPuy, secretary; Dr. Harold Swanberg, treasurer; Dr. Ralph McReynolds, accounting officer and medicolegal advisor. Dr. McReynolds was also elected delegate to the Illinois State Medical Society, with Dr. Walter Whitaker as alternate.

CHAMPAIGN

Society News.—Dr. Geza de Takats, Chicago, professor of surgery, University of Illinois College of Medicine, gave an illustrated presentation of "Peripheral Vascular Diseases" before the Champaign County Medical Society recently.

COOK

Personal.—Dr. Edward H. Warszewski has been appointed chief of staff and chief surgeon at St. Mary of Nazareth Hospital, succeeding the late Dr. Tadeusz M. Larkowski.

Society News.—Dr. Harold Laufman addressed the Racine County Medical Society recently on "Vascular Phenomena in Intestinal Strangulation Obstruction."—Dr. Harry Sofield addressed the Chicago Society of Physical Medicine and Rehabilitation, March 28, on "Orthopedic Aspects of Low Back Pain."—Dr. Paul H. Reitman, assistant director, tumor clinic, Michael Reese Hospital, addressed the Chicago Rheumatism Society recently on "The Approach to the Diagnosis of Bone Tumors."—Dr. Meyer A. Perlstein discussed "The Medical Aspects of Cerebral Palsy" for the education seminar of the University of Iowa, April 4. The following day will be devoted to cerebral palsy clinics. The Arkansas Medical Society will be addressed April 23 by Dr. Perlstein, in Little Rock, under the auspices of the Arkansas Society for Crippled Children. Dr. Perlstein will conduct clinics and discuss "Newer Drugs in the Treatment of Epilepsy."

University News.—Dr. Lester R. Dragstedt, head of the department of surgery, University of Chicago School of Medicine, discussed "The Physiology of Gastric Secretion and Its Relation to the Ulcer Problem" at an assembly hour lecture at the University of Illinois College of Medicine, February 21.

Seminar on Rehabilitation of the Amputee.—The Chicago Society of Physical Medicine and Rehabilitation will sponsor a seminar on "Rehabilitation of the Amputee" at Veterans Administration Hospital, Hines, April 25. Dr. Louis B. Newman, president of the society, will open the meeting. Other participants will be Dr. George Barnett, "Pathology, Physiology and Anatomy in Relation to Amputations"; Dr. Maxwell D. Flank, "Stump Care, General Conditioning and Management of the Amputee,

Occupational Therapy"; Dr. Louis Gereb, Demonstration of Patients with Various Types of Artificial Extremities. Ambulation and Gait Training; and Dr. Herman Joffe, Orthopedists' Point of View.

Dr. Gilbert to Direct N. U. Teaching Program at Cook County Hospital.—Dr. Robert P. Gilbert, Chicago physician, 2928 E. 78th St., has joined the Northwestern University Medical School faculty as director of the University's teaching program at Cook County Hospital.

In his new position Dr. Gilbert will perform duties in administration, teaching, and research. As head of the teaching program he will direct the course work conducted at the hospital by the Medical School's Department of Medicine. He also will continue his previous research work on heart ailments, specializing in coronary thrombosis study.

Dr. Gilbert is a graduate of Haverford College, Haverford, Pa., and received his medical degree at Northwestern in 1943. He served as a navy surgeon from 1943 to 1948, when he began private practice in Chicago.

Frances Mullin Named Dean at Chicago Medical School.—Effective March 1, Frances J. Mullin, Ph.D., dean of students, Division of Biological Sciences, University of Chicago School of Medicine, has been appointed dean at the Chicago Medical School and professor of physiology. Author and co-author of over twenty contributions in the field of medical research, Dr. Mullin is recognized especially for studies in the physiology of sleep, circulation and peripheral sensitivity. He is an alumnus of the University of Missouri and received degrees of S.M. and Ph.D. from the University of Chicago. Membership in a number of scientific societies includes the Inter-Association Committee on Internships of which he is chairman. Dr. Andrew H. Ryan, on the faculty of the School since 1944, will become dean of students while continuing in his present capacity of associate professor of physiology. Dr. Ryan is a graduate of Washington University, St. Louis, and has held professorships in the medical schools of the University of Pittsburgh, Tufts College and the University of Maryland.

Grants for Research.—Two grants from the National Cancer Institute, U. S. Public Health Service, have been made to the Chicago Medical School for cancer training and research under the direction of Dr. Philippe Shubik, coordinator of the cancer teaching program. The sum of $25,000 from the Cancer Control Branch is renewed for another year for cancer teaching; $10,000 ($5,000 for two years) is granted for research in "The Mechanism of Chemical Production of Cancer." Dr. Shubik, a graduate of the University of Oxford, England, was engaged in teaching and cancer research at Northwestern University before joining the faculty of the Chicago Medical School last June.

New Scholar Named at Illinois.—Dr. Richard E. Marcus, University of Illinois College of Medicine, was named as a scholar in medical science by the John and Mary R. Markle Foundation of New York City, it was reported March 5. The Foundation announced that $30,000 would be appropriated to the University of Illinois for Dr. Marcus, payable $6,000 annually for five years. The grants are designed to keep young physicians on teaching and research staffs of medical schools. Dr. Marcus currently serves as assistant professor of ear-nose-throat at the University of Illinois. He also is assistant director of the speech and hearing rehabilitation unit at the Illinois Eye and Ear Infirmary.

Appointed Scholar in Medical Science.—Dr. John A. D. Cooper, Northwestern University assistant professor of chemistry (medical), Evanston, has been appointed a scholar in medical science by the John and Mary R. Markle Foundation of New York.

Dr. Cooper will receive $6,000 annually for a period of five years, beginning this year, for support during his teaching of medical science and his research in the field of physiological chemistry.

The award is one of 20 presented to young medical scientists throughout the country this year. The Foundation's program was begun in 1948 to assist medical schools in retaining young scientists of special ability in teaching and research. The awards assure academic and economic security during the early years of the scholar's career. Major qualifications for the award are competence and promise in medical research and teaching, and personal character and interest in the work.

Dr. Cooper has conducted extensive research in physical biochemistry as applied to medical problems. Recently he has studied the chemistry of isotopes, elements which have the same chemical properties, but different atomic weights for nuclear structures.

Chicago Medical Society Moves to New Home.—After May 1, the Chicago Medical Society will be located in the John Crerar Library building. The move is in step with a program to make the building a science center in Chicago. Other societies now housed there are the Institute of Medicine of Chicago, Western Society of Engineers, the Chicago section of the American Chemical Society, and the Chicago Chemists Club.

CRAWFORD

Society News.—Dr. Edward Greer discussed "Cirrhosis of Liver" before the Crawford County Medical Society recently.

DE KALB

Survey to Determine Need of Health Department.—The Sycamore Republican announced a proposed survey recently which will be conducted by the De Kalb County Health Council, the De Kalb County Medical Society and the auxiliary to the latter group, to determine the need of a local health department.

DE WITT

County Secretary Honored for Years of Service.—In recognition for the long and devoted service to the cause of organized medicine, the DeWitt County Medical Society pays this tribute to "Will" R. Marshall, M.D., Clinton, Illinois, who has just completed 26 years as Secretary-Treasurer of this society. Dr. "Will" was born to a large farm family in Butler County, Pennsylvania, received his elementary education in a rural community school. His secondary education was obtained at the Slippery Rock Normal School, where he showed an unusual interest and ability in baseball. He later played as catcher on the Grove City College team. In 1898, Dr. "Will" was employed by the office of Carnegie Steel, Homestead, Pennsylvania, and was catcher on the company baseball team. In 1903, Dr. "Will" played with the Western League, Des Moines, Iowa. His major league baseball career really began when he became connected with the New York Giants of the National League, with whom he played during 1903-04. He was transferred to the St. Louis Cardinals where he played as first string catcher during 1906-07. In 1908, Dr. "Will" joined the Chicago Cubs, the year they won the World Series. In 1904, Dr. "Will" entered Loyola University School of Medicine, Chicago, from which he was graduated in 1909 with a degree of Doctor of Medicine. During these years, because of baseball, Dr. "Will" attended Medical School only during the winter months, which made it necessary to study five years in order to complete his medical course. Following his graduation in Medicine, Dr. "Will" joined the American Association and played baseball for the Milwaukee Brewers. Following an internship at Cooper Hospital, Camdon, N. J. 1912-13, Dr. "Will" came to Clinton, Illinois, to begin the practice of Medicine, to which he has given the same enthusiastic interest that had been given to baseball during previous years. Dr. "Will" Marshall was largely responsible for re-activating the DeWitt County Medical Society which, at that time, was not a functional organization. Twenty-six years ago, he was elected Secretary-Treasurer, an office which he held until December 1950, at which time he asked not to be re-elected, even against the protests of the Society. As a staunch supporter of worthwhile community activities, Dr. "Will" has been an active member of the Presbyterian Church; he has served on the board of the Clinton Y.M.C.A. and actively participated in boys work; for many years, he was a member of the Clinton Rotary Club. He served on the DeWitt County Tuberculosis Sanatorium Board for two years, being appointed Chairman in June 1919. He is a member of the Clinton Country Club and enjoys a good game of golf. Also, he is a member of the directors of the DeWitt County Chapter, Foundation for Infantile Paralysis.

Among his outstanding contributions in Community Service has been his work with the DeWitt County Tuberculosis Association. He served the organization as secretary for a number of years and is now Vice President of the Association.

The DeWitt County Medical Society, in paying their respects to an outstanding citizen, a physician who always has promoted high ethical and professional standards in medicine, hereby request that this biographical sketch of the life of Dr. "Will" R. Marshall be recorded in the local newspaper and that a copy be sent to the editor of the Journal of the Illinois State Medical Society.

DU PAGE

Personal.—Dr. Carl Schultz, Hinsdale, has been reappointed a member of the DuPage County Board of Health.

EFFINGHAM

Hospital News.—Construction of a new St. Anthony's Memorial Hospital to replace the one destroyed by fire in April, 1949, will begin about May 1, according to the Marion Republican. Dr. Dwight Niccum, president, Effingham Civic Foundation, said the 150 bed hospital will cost about three million dollars. Some five-hundred thousand dollars in contributions came in from all over the country following the fire which took 75 lives. The balance will be paid by state and federal aid.

FORD

Society Election.—Dr. E. C. Bucher, Gibson City, has been elected president of the Ford County Medical Society for 1951. Other new officers are Dr. M. D. E. Peterson, Paxton, vice president; Dr. G. M. Noble, Paxton, secretary-treasurer; Dr. C. A. Rulison, Roberts, delegate to the Illinois State Medical Society; and Dr. Bucher, alternate.

FULTON

Physician Honored.—Dr. and Mrs. E. E. Davis were honored at a dinner in February to mark the fiftieth anniversary of Dr. Davis' coming to Avon to practice medicine.

HENRY

Society News.—Dr. Lee T. Hoyt, Roseville, addressed the Henry County soil conservation district recently on "Soil, Conservation, Nutrition and Human Health."

JEFFERSON

Personal.—Dr. Andy Hall, Mount Vernon, was named one of a seven men committee to study the sewer problems in Mount Vernon.

KANKAKEE

Dr. Wisner Honored.—Dr. L. G. Wisner, practicing physician in Herscher for thirty-five years, was honored when the Herscher Chamber of Commerce held a dinner for him in February. Dr. Edwin Hamilton, Kankakee, was the principal speaker.

KNOX

Society News.—Dr. John Gray, professor of physiology, Northwestern University Medical School, recently addressed the Knox County Medical Society, in Galesburg, on "Dyspnoea."

MACON

Civil Defense Division Created.—The medical and health division of Decatur's civil defense program was organized at a meeting February 6. It will be headed by Dr. F. G. Irwin. Other appointments to the committee are Dr. J. B. Waller, training and personnel; Dr. H. J. Bavor, blood services; Dr. H. J. Burstein, health supplies; Dr. A. F. Goodyear and L. C. Pullen, Jr., administrator for Decatur and Macon County Hospital, hospital services; Dr. R. V. Atz, public information; Dr. P. A. Steele, city health commissioner, public health; and Dr. W. C. Smullen, special weapons defense.

MADISON

C. E. Molden Wins Citizen's Award.—Dr. Charles E. Molden, Troy, who has practiced medicine for forty-three years, was chosen as the city's "Citizen of 1950", the first annual award to be made. Presentation of a plaque marking the event was made to Dr. Molden by Paul Simon, editor and publisher of the Tribune, which is sponsoring the election each year. In giving the plaque to Dr. Molden, Mr. Simon said, "The man who receives the award this year could well be called 'Troy's Citizen of the Half-Century.' Dr. Molden has given of his time at all hours of the day and night for the people of our community. What he has done is in the best tradition of America's smaller communities." In accepting the nomination. Dr. Molden said, "If I were to make the choice, I would have been the last person to receive it."

MC HENRY

Personal.—Dr. B. B. Neuchiller, Woodstock, has moved his offices from the corner of Calhoun and Dean Sts., where he practiced four years, to the new building he has erected at 454 W. Jackson St. Living quarters for the family will be located on the first floor.

PERRY

Society News.—Dr. Wilbert M. Gansloser, St. Louis, addressed the Six-County Medical Society recently on "General Problems of Psychiatry in General Practice." The Six Counties are Jackson, Randolph, Perry, Franklin, Union and Williamson.

RICHLAND

Society News.—Dr. John Doenges, Olney, addressed the Olney Kiwanis Club recently on "Heart Disease."

ROCK ISLAND

Society News.—Dr. Richard B. Capps, Chicago, discussed "Recent Developments in the Field of Liver Disease" before the Rock Island County Medical Society, March 13, at St. Anthony's Hospital.—"Recent Developments in Hematology" was presented recently before the Rock Island County Medical Society by Dr. D. C. Campbell, Rochester.

SHELBY

Society Election.—Dr. E. M. Montgomery was chosen president of the Shelby County Medical Society at its recent meeting. Other officers are Dr. O. G. Kauder, vice president; Dr. H. C. Turney, secretary-treasurer. Dr. Turney was chosen delegate to the Illinois State Medical Society, with Dr. H. Pettry, alternate. Censors are Dr. S. D. Taylor, Dr. Pettry and Dr. Kauder.

VERMILION

Society News.—Dr. Armand J. Mauzey, Chicago, addressed the Vermilion County Medical Society recently on "Clinical Significance of the Retrodisplaced Uterus."

Personal.—Dr. A. Reese Matteson, a member of the staff of the Danville Poly-clinic, was recently certified by the American Board of Otolaryngology.

Robert Clements Retires.—After forty-six years of service to the people of Vermilion County, Dr. Robert Clements, Danville, has announced his retirement.

WARREN

Personal.—Dr. James W. Packard Jr. has opened an office in the Medical Arts Building, Monmouth.

WINNEBAGO

Society News.—The Winnebago County Medical Society was addressed March 13 in Rockford on "Tic Douloureux and other Neurological Problems" by Dr. Eric Oldberg, Chicago.

GENERAL

Dr. Cross Honored by Veterinarians.—On January 31, 1951, Dr. Roland R. Cross, Director, Illinois Department of Public Health, was unanimously elected to honorary membership in the Illinois State Veterinary Medical Association.

On many occasions over the past several years, Dr. Cross has emphasized publicly his recognition

and appreciation of the contributions of veterinary medicine to the public health.

Dr. Cross' formal recognition of the Illinois veterinary profession came with the appointment of Dr. L. R. Davenport to the staff of the Illinois Department of Public Health as veterinary medical consultant. Since then Dr. Cross and Dr. Davenport have worked closely with the veterinary profession in developing a veterinary public health program.

Welfare Department Statistics.—The book population of all institutions Dec. 31, 1950 was 55,566. This includes not only those present, but also all those in out-patient convalescent care. The resident population December 31, 1950 was as 48,370.

The greatest increase over December of last year was in the nine hospitals for the mentally ill, in which the population rose 564. There were 873 admissions, 604 discharges, and 326 deaths during the month. Also during the month, 420 were placed on conditional discharge and 26 in family care. There were 39,731 on books December 31, 1950.

The two institutions for the mentally defective (Dixon State Hospital and Lincoln State School and Colony) show an increase of 308 over previous year. The resident population was 9,347 with 10,642 on books December 31, 1950.

There were 380 in Security Hospital Dec. 31, 1950. Of this number, 292 were mentally ill and 88 were mentally deficient.

At Neuropsychiatric Institute, where most admissions are temporary for special treatment, 41 patients were present at end of month.

The Veterans' Rehabilitation Center in Chicago and the Veterans Clinics in Champaign, Rockford, and Peoria received 70 new cases during the month. There were 1,372 visits to the clinic in Chicago, 160 in Champaign, 22 in Peoria, and 32 in Rockford. Since opening these centers, 6,825 veterans have received treatment at Chicago, 283 at Champaign, 60 at Peoria and 107 at Rockford.

The Division of Veterans' Service reported 3,620 present in all Welfare institutions Dec. 31, 1950. Of this number, 2,019 were World War I veterans and 984 were World War II veterans. There were 217 admissions, 126 discharges, and 15 deaths during the month.

The Division of Community Clinics reported 175 new cases during the month with 1,667 cases continued from previous month.

In addition, 1,342 patients were interviewed in out-patient psychiatric clinics. There were 2,698 visits to these clinics during the month.

Boys' Training School, Girls' Training School, Women's Reformatory, and Illinois State Reformatory reported 851 juvenile delinquents, felons, and misdemeanants present December 31, 1950. Forty-nine were received from court and 39 were discharged during the month.

There were 209 pupils enrolled in School for Blind and 437 enrolled in School for Deaf, December 31, 1950. There were 90 children present in Children's Hospital-School and 357 at Soldiers' and Sailors' Children's School at the end of the month.

There were 1,361 present in Soldiers' and Sailors' Home, Soldiers' Widows' Home, and Industrial Home for Blind.

The Institute for Juvenile Research interviewed 121 new cases during the month. There were 167 case reports during the month.

Clinical and diagnostic services for Eye and Ear Infirmary administered 11,236 treatments during the month, while clinics for Trachoma Control and Prevention of Blindness administered 648 treatments during the month.

DEATHS

James H. Appleman, Chicago, who graduated at Hahnemann Medical College and Hospital, Chicago, in 1911, died March 9, aged 64.

Sherman E. Bigler, Neoga, who graduated at Northwestern University Medical School in 1907, died February 18, aged 68. He began practicing medicine in Neoga in 1909.

Leo V. Fairhall, Danville, who graduated at the University of Illinois College of Medicine in 1906, died recently, aged 71.

William Robert Gardiner, Herrin, who graduated at University of Medical School of Medicine and College of Physicians and Surgeons, Baltimore, Md., in 1910, died at Herrin Hospital, February 13, aged 65.

Jesse M. Hoyt, Nokomis, who graduated at Marion-Sims College of Medicine, St. Louis, Mo., in 1897, died February 18, aged 78.

Chance T. Kell, Chicago, who graduated at Bennett Medical College, Chicago, in 1915, died December 22, aged 65, of coronary occlusion and hypertension.

Louis J. Klostermann, Hoyleton, who graduated at Homeopathic Medical College of Missouri, St. Louis, in 1898, died in St. Mary's Hospital, Centralia, February 19, aged 71. He had practiced medicine in Hoyleton for 52 years.

Howard S. Maupin, Quincy, who graduated at the University of Illinois College of Medicine in 1914, died December 17, aged 59. He had practiced medicine in the field of pediatrics in Quincy since 1926.

Sidney A. Smith, Chillicothe, who graduated at the University of Illinois College in 1910, died February 23, aged 65, of injuries suffered in an automobile crash. He was formerly mayor of Chillicothe.

James M. Tucker, formerly of Chicago, who graduated at Jefferson Medical College of Philadelphia in 1941, died recently, aged 36. He had lived in Piedmont, Cal. for the past year.

Fred C. Zapffe, Oak Park, who graduated at the University of Illinois College of Medicine in 1896, died March 10, aged 77.

"FOR THE COMMON GOOD"

Health Talk on TV.—Since the last issue of the Illinois Medical Journal, the following telecasts have been presented by the Educational Committee over WGN-TV, Channel 9, Monday evenings, 9 p.m.:

Maurice H. Cottle, February 26, If Your Nose Needs Repair.

Howard A. Lindberg, March 5, Understanding Nephritis. Denoyer-Geppert Company cooperated in providing equipment.

Irwin R. Callen, March 12, What is Chronic Illness? Zimmer-Splint Company provided equipment for this telecast.

Vernon Turner, March 19, Does Your Back Ache? Denoyer-Geppert Company cooperated in providing equipment.

Your Doctor Speaks over WFJL, Thursday evenings at 7:30, carried the following transcribed broadcasts under the auspices of the Educational Committee:

Frank B. Kelly, March 1, Pneumonia.

Walter S. Priest, March 8, Arteriosclerosis.

Thomas J. Naughton, March 22, The Present Status of Contact Lenses.

Harold Shellow, March 29, Your Skin, Hair and Nails.

You and Your Baby over Station WAAF, Tuesday mornings, at 10:30, carried the following live broadcasts; this series was repeated:

Maxwell P. Borovsky, February 20, Understanding Your Baby.

Arthur W. Fleming, February 27, The Young Explorer.

Arthur Rosenblum, March 6, What First—Mind or Body?

Here is Your Doctor over Station WCFL, Saturday mornings at 11 a.m., presented the following physicians in transcribed broadcasts under the auspices of the Educational Committee:

Bertram G. Nelson, February 24, Nephritis.

Thomas J. Coogan, March 3, High Blood Pressure.

Robert E. Lee, March 10, The Periodic Physical Examination.

Henry H. Fineberg, March 17, Behaviour and Mental Hygiene.

Harold C. Voris, March 24, Is it a Stroke, Doctor?

Lectures Arranged Through the Educational Committee:

Edward J. O'Donovan, March 7, Loop Center, YWCA, Preventive Medicine.

Arthur W. Fleming, March 13, Parent Education Group, Marquette PTA, Sex Guidance Through the School Years.

Sol Ditkowsky, March 20, Patrick Henry PTA, Your Child's Health.

George Byfield, March 21, Loop Center, YWCA, Advances in Medicine.

Mrs. Kris Peterson, administrative assistant, Public Relations, American Medical Association, March 27, Irving Park Branch, Woman's Auxiliary to the Chicago Medical Society, Petticoat Public Relations.

Arthur W. Fleming, March 28, Retarded Children's Aid, Physical Care of the Mentally Retarded Child in the Home.

Willard L. Wood, April 4, Hiram Kelly Branch Library, Newer Developments in Arthritis.

Kenneth Nolan, April 10, Calvin Coolidge PTA, Public School Health.

Edwin F. Hirsch, April 16, The Micromaids, St. Mary's High School, Advances in Medicine.

Mrs. James Wilson, Wilmette, author, "Mrs. Wilson's Kitchen", Today's Health, May 8, William Penn Nixon PTA, Feeding Our Families.

Paul K. Anthony, May 14, St. Rita High School Mothers' Club, Understanding the Adolescent.

Robert R. Mustell, May 15, Paul Cornell PTA, Personal Hygiene.

Robert R. Mustell, May 18, Alexander Graham Bell PTA, The Menopause.

Lectures Arranged Through the Scientific Service Committee:

Charles D. Krause, Chicago, Henry County Medical Society in Kewanee, March 8, on Cesarian Section, illustrated.

R. Gordon Brown, Chicago, La Salle County Medical Society in Ottawa, March 15, Some Commonly Overlooked Diseases of the Endocrine Glands, illustrated.

Charles F. Alderson, East St. Louis, Effingham County Medical Society, in Effingham, March 19, Lesions of the Colon and Rectum, illustrated.

Richard Allyn, Springfield, Iroquois County Medical Society in Watseka, March 20, on Nephritis.

Robert J. Hawkins, Chicago, McDonough County Medical Society in Macomb, March 30, on Elderly Primipara, illustrated.

David I. Abramson, Chicago, De Kalb County Medical Society, March 27, on Differential Diagnosis of Common Peripheral Vascular Disorders, illustrated.

William B. Raycraft, Oak Park, Fulton County Medical Society in Canton, April 12, on Feeding in Infancy and Childhood.

Irwin R. Callen, Chicago, Iroquois County Medical Society in Watseka, April 17, on Hypertensive Heart Disease, illustrated.

George Cummins, Chicago, Stock Yards Branch, Chicago Medical Society, April 19, Cardiovascular Aspects of Aging, illustrated.

Oscar Hawkinson, Oak Park, De Kalb County Medical Society, April 24, on Commoner Lesions of the Spinal Cord.

Jerome T. Paul, Chicago, McDonough County Medical Society, in Macomb, April 27, on Management of Emergency Problems in Diabetes, illustrated.

Wayne B. Slaughter, Chicago, Whiteside-Lee County Medical Societies, in Rock Falls (Sterling), May 10, on Timing of Surgical Repair in Congenital Defects, illustrated.

Emery G. Grimm, Chicago, Iroquois County Medical Society in Watseka, May 15, Diagnosis and Treatment of Common Endocrine Diseases, illustrated.

Herman A. Levy, Chicago, McDonough County Medical Society in Bushnell, May 25, on The Treatment of Bronchial Asthma by the General Practitioner, illustrated.

Charles J. Smith, Chicago, Whiteside-Lee County Medical Societies, Rock Falls (Sterling), June 7, Vaginal Deliveries Following Cesarean Section, illustrated.

Joint Conference Arranged by the Postgraduate Education Committee:

In Carbondale at the Eagles Club, April 5, for the Ninth and Tenth Councilor Districts, including the counties of Edwards, Franklin, Gallatin, Hamilton, Hardin, Jefferson, Johnson, Massac, Pope, Saline, Wabash, Wayne, White, Williamson, Jackson, Monroe, Perry, Pulaski, Randolph, St. Clair, Union and Washington. The Jackson County Medical Society acted as host. The following physicians participated:

Edwin J. DeCosta, assistant professor in obstetrics and gynecology, Northwestern University Medical School, Prolonged Labor.

Sidney Smith, St. Louis, assistant professor of surgery, St. Louis University School of Medicine, Surgery of Congenital Defects in Children.

Sol Mackler, attending thoracic surgeon, Cook County Hospital, Spontaneous Rupture of the Esophagus, illustrated.

Fay M. Whitsell, chief of eye service, Woodlawn Hospital, Vascular Disease in Relation to the Eye, illustrated.

L. Martin Hardy, assistant professor of pediatrics, Northwestern University Medical School, Psychosomatic Problems in Pediatrics, illustrated.

Charles Lawrence, clinical assistant in medicine, Northwestern University Medical School, Viral Hepatitis.

Amos J. Brown, instructor in medicine, Chicago Medical School, Clinical Aspects of ACTH and Cortisone Therapy.

After dinner in the evening, Dr. B. E. Montgomery, Harrisburg, will discuss "Voluntary Prepaid Medical Insurance", and LeRoy H. Sloan, clinical professor of medicine at the University of Illinois College of Medicine, will give a presentation on Changing Patterns in Medicine.

36

SCIENTIFIC EXHIBITS

36

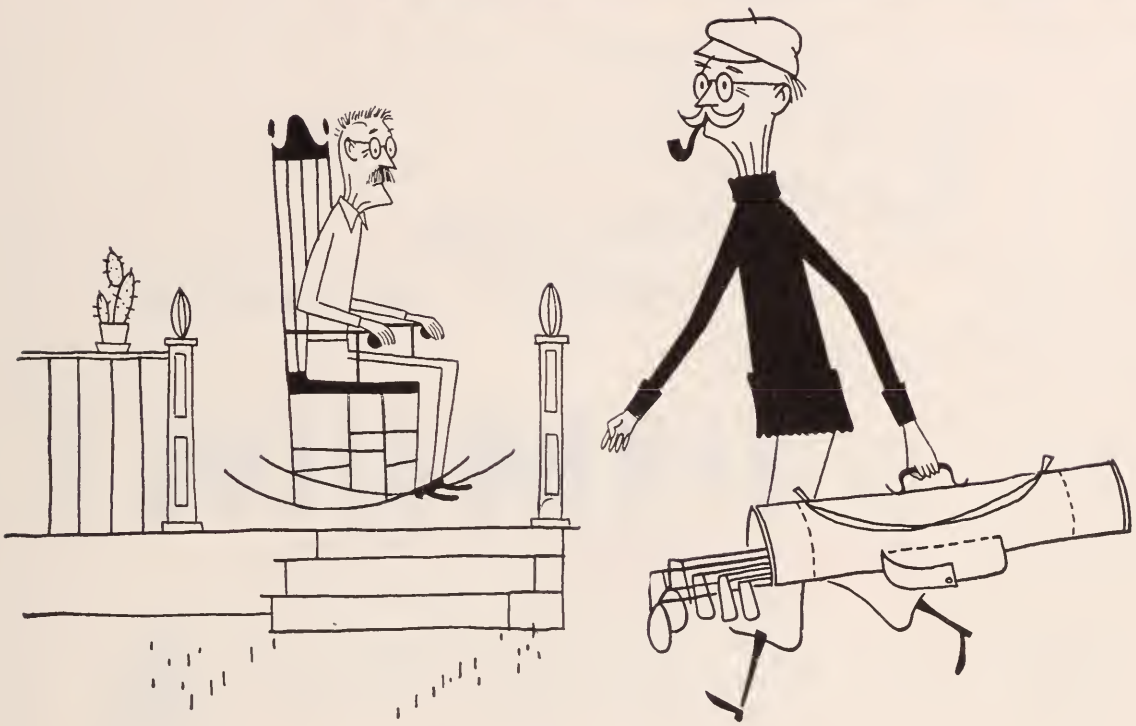
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(George Bickel in La Presse Medicale, 20 January 1951)

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(Quoted from Medicine et Hygiene, No. 187, 3 February 1951)

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1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. *57*:541 (1949).
2. Chesley, R. F., and Annitto, J. E.: Bull. Margaret Hague Mat. Hosp. *1*:68 (1948).
3. Dieckmann, W. J. et al: Am. J. Obstet. & Gynec. *59*:442 (1950).

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PHYSICAL MEDICINE ABSTRACTS



RHEUMATOID SPONDYLITIS (STRUMPELL-MARIE ARTHRITIS): ORTHOPEDIC

Theodore A. Potter, M. D., Boston, Mass. In AMERICAN PRACTITIONER, 1:11:1129, November 1950.

Pain in the low-back and sacroiliac areas causes lumbar muscle spasm so that the normal lordosis is obliterated. The flat low back is an early sign of spondylitis.

The cervical spine may become flexed or extended, depending on the patient's posture. If he has been active, that is, on his feet during the flexion phase of the dorsal spine, he will gradually compensate by hyperextending his cervical spine. If, on the other hand, he remains in a chair or bed, propped up with pillows, the head will gradually drop forward and many times become ankylosed there. Most cases acquire rotation to one side or another, usually a left-tilted head in a right-handed individual. In one such case the chin and left cheek rested on the chest wall and was rigidly ankylosed there.

Hips and shoulders are commonly involved and may become ankylosed. Faulty body mechanics is the predisposing factor in the production of these joint changes. Added stress and strain seems to be the inciting cause so that they break down, wear out and lose motion.

Picture a patient with a rigid, flexed spine. If he stays this way he cannot see where he's going, so to compensate for lost spinal motion he flexes hips and knees in walking and standing. When this attitude is maintained for a period of years, flexion deformity of hips and knees takes place. No joint improperly aligned will long bear such usuage, and it will break down. Hips develop deformities in flexion and adduction, the former due to bad posture and spasm of the iliopsoas, the latter due to adductor spasm, and later contraction. The shoulders become fixed to the chest and lose the range of motion in abduction and external rotation. Upper spinal muscle spasm clamps the arms to the sides, contractures later set in and the anterior muscles, particularly the pectorals, become shortened; all this then leads also to restricted shoulder motion. We have seen several cases of complete rigidity from toe tip to eyeballs.

The treatment of rheumatoid spondylitis is almost wholly an orthopedic problem. Its aim is two-fold: (1) arresting the inflammation; and (2) prevention of spinal and chest deformity, and subsequent lower extremity and shoulder deformities. Following is the typical way we handle an early case coming to us for the first time:

a. The patient is hospitalized.

b. A firm bed is provided; 24-hour bed rest is advised.

c. X-rays, laboratory work and posture photographs are taken initially.

d. A resting plaster back shell is made for the

(*Continued on page* 56)

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J.A.M.A. *140*:672 (June 25) 1949



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As little as 0.5 Gm., given orally every few hours, has produced a good response. However, for optimum effect, 0.75 Gm. or more is given several times a day.

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Tablets, 0.5 Gm., 0.25 Gm.; *Capsules*, 0.25 Gm.;
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patient. He is instructed to use it at all times. The shell is used until spasm and pain have subsided — usually about ten days.

e. Hot fomentations to the spine and hips are given three times daily. Moist heat quiets the spasm better than dry heat.

f. Lying postural exercises and gentle back massage are given two to three times daily. Initial exercises are performed to increase chest expansion, gain control of abdominal muscles and strengthen spinal extensors.

g. Roentgen therapy is started the first or second day after entry.

Spinal braces have been discarded by us, since we do not feel they do the job of protection or correction adequately.

In the older patients with demonstrable calcification by roentgen ray and what appears to be clinical rigidity with flexion deformity, the same serial jacket program is carried out. In spite of apparent ankylosis there always are one or more areas that are slightly movable, and through these, corrections can be made. The cervicodorsal, dorsolumbar junctions are the two usual sites where slow stretching can take place with the repeated corrective jackets. Head traction and a special adjustable chin post attached to the jackets helps to correct and maintain flexed cervical spines.

A HISTOLOGIC STUDY OF MUSCLES AND NERVES IN POLIOMYELITIS

John Denst, M. D., and Karl T. Neubuerger, M. D., Denver, Colo. In THE AMERICAN JOURNAL OF PATHOLOGY, 26:5:863, September 1950.

The pathologic changes in voluntary muscles and nerves in poliomyelitis have received little attention in comparison with the lesions in the central nervous system. Extensive biopsy studies were made by Kopits in cases of several years' duration, and by Hipps who correlated anatomical features with muscular function and clinical treatment. Hassin and Horanyi-Hechst found muscle alterations in acute cases, and Flynn reported advanced degeneration in many muscles of a patient who died 5½ months after the onset of the disease. Clawson, Noble, and Lufkin examined samples of seven muscles from 22 cases of acute poliomyelitis and found areas of focal myositis in 2 patients. Important contributions in this field include also those of Carey, Massopust, Zeit, and Haushalter, who found disintegration of the motor end-plates of human beings and monkeys in the earliest stages of the disease. Dublin, Bede, and Brown observed degeneration of the myoneural junctions, nerve fibers, and muscles in biopsy specimens from 3 patients who had had poliomyelitis for from 5 to 7 weeks.

Voluntary muscles and peripheral nerves of 14 fatal cases of acute and chronic poliomyelitis were examined histologically.

The muscular changes consisted of early fatty metamorphosis, followed by varying degrees of degeneration, atrophy, and late fibrosis. Plasmodial formations of sarcolemmal nuclei in connection with disintegration of muscle fibers were seen frequently. Hypertrophic fibers were found in late cases. Proof of true regeneration was sembled that of the neurogenic forms of muscular atrophy, but occasionally was reminiscent of lacking. The histologic picture, as a rule, re- that of progressive muscular dystrophy.

The nerves showed very early stripe-shaped demyelination and relatively minor change in the axis cylinders. The lesions in the nerves appeared less severe and less extensive than those in the muscles. The pathologic process appeared to be different from wallerian degeneration.

The possibility of direct action of the virus on muscles and nerves must be considered.

OBSTETRICAL AND GYNECOLOGICAL ASPECTS OF BACKACHE

Robert F. Lamar, M.D., Kansas City, Mo. In INDUSTRIAL MEDICINE AND SURGERY, 20: 1:19, January 1951.

Backache in pregnancy is an extremely common complaint and, while its nature is most often orthopedic, the obstetrician usually is called upon for palliation. The increase in abdominal content causes a shift in the center of equilibrium in the pregnant woman that is of such a degree as to require increasingly exaggerated postural adjustments. Joint strain low in the back is an obvious concomitant, and therapy aimed at approaching a more normal body posture is of value. Simple instruction as to standing straight and habitually holding the buttocks together so as to increase abdominal tone may help considerably. High and narrow shoes should be replaced, and a hard bed almost always is

(*Continued on page* 58)

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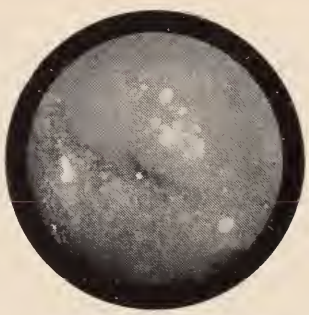


Photo taken after insertion of "RAMSES" Vaginal Jelly. Os occluded.

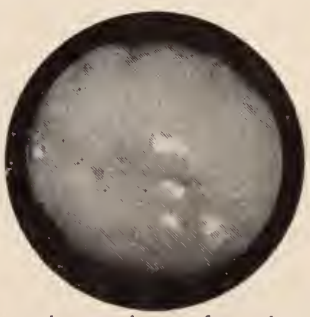


Photo taken ten hours after coitus. Occlusion still manifest.

Jelly stained with nonspermatocidal concentration of methylene blue for photographic purposes.

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helpful. Local heat is a useful measure in the more severe cases, some of which may require adhesive strap support.

HOME CARE FOR POLIOMYELITIS

Emil D. W. Hauser, M.D. In QUARTERLY BULLETIN OF NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, 25:1:21, Spring 1951.

This paper is concerned with the *art* of home care for poliomyelitis in contrast to the *science* of home care. The scientific approach is accurate, but general, and is concerned with ideas. A discussion of the art can be more specific and concerned with what is actually done, or with action and with individuals. This is based on the actual care given to patients at Passavant Hospital in Chicago.

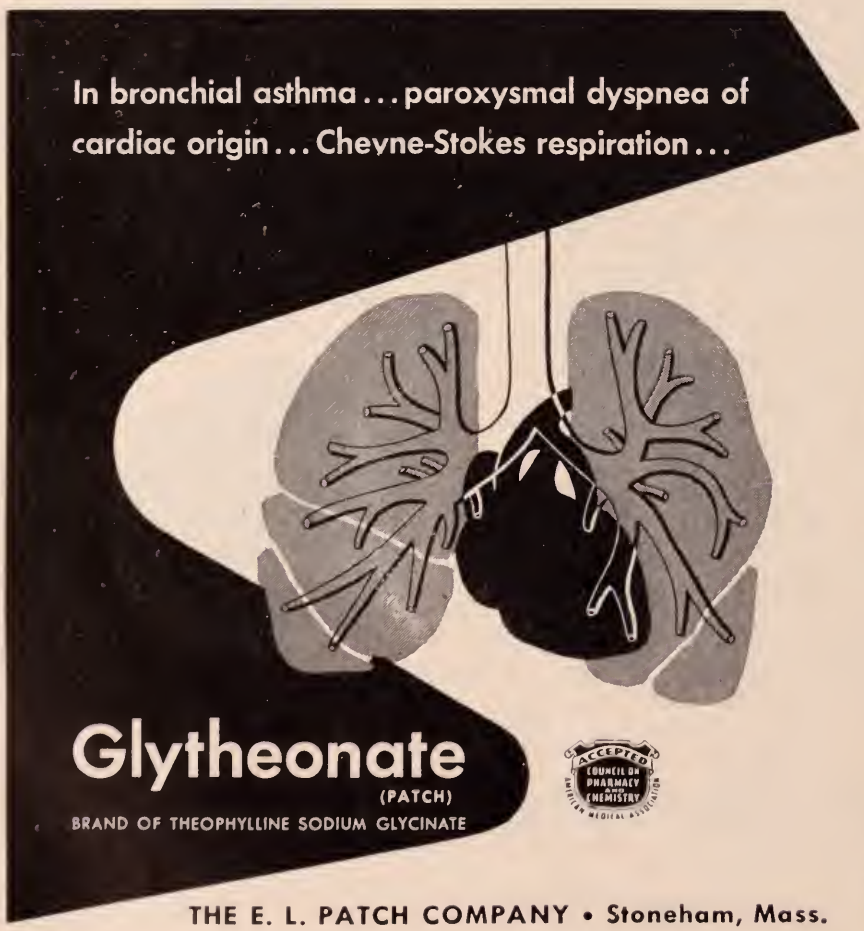
Almost everything may be important in the care of a poliomyelitis patient, but we are most directly concerned with the restitution of the individual. This includes general health as well as rehabilitation of the part of the body affected by paralysis.

The majority of cases seen are referred from the contagious hospitals; of these, the highest percentage know no other treatment except home care. Only the most severe cases require further hospital care. Most cases are ambulant, and the program for their care is outlined to the physical therapist and to the family, as well as to the patient. Specific rules are laid down and the reasons for them are given.

Every effort is made to discontinue any therapeutic measure as soon as it is no longer essential for recovery. The sooner normal activity can be carried out safely the sooner the specific exercises and treatments can be discontinued. When the patient is restored to normal so that there can be no relapse due to weakness, he is dismissed.

For those ambulant patients who have some permanent disability with true paralysis, braces are used to carry out the maximum function and to prevent deformity. Surgery is performed when the child is older so that the brace can be abolished. In this way, the majority of the

(*Continued on page 62*)



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*Council on Pharmacy & Chemistry: New and Nonofficial Remedies, 1950, Philadelphia, J. B. Lippincott Company, 1950, p. 285.



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*Perloff, W. H.: Am. J. Obst. & Gynec. **58**:684 (Oct.) 1949

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Physical Medicine (Continued)

patients are cared for in their homes throughout the course of their treatment after the period of isolation is over.

The severely involved cases, the respiratory cases and those with bulbar paralysis require hospitalization. The first objective is to save life, then to gain the maximum amount of power. Most of these cases can be freed from the respirator and get to swallow after which time they can be treated at home even though paralysis is severe. In some cases the paralysis is so severe that use of the respirator has to be continued at home, and for this the simplest type of chest respirator is used.

Arrangements for home care should be made whenever possible. It costs less, it can help relieve the critical shortage of hospital beds, and life at home is preferable to life in the hospital for a patient who must make a readjustment to everyday living. In his normal environment and stimulated by family relationships the patient usually shows a marked emotional and psychological improvement. Home care results in a more rapid social and financial rehabilitation. It makes certain that the maximum amount of benefit is obtained from hospital treatment at a minimal cost.

FRACTURES OF THE DISTAL END OF THE RADIUS

Fremont A. Chandler, M. D., Chicago, Ill. In JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, 40:11:518, November 1950.

Fractures of the distal end of the radius constitute a considerable portion of the skeletal lesions, due to trauma, seen by the general practitioner or surgeon. These fractures occur at all ages and are usually the result of reflex protective attitudes assumed in breaking a fall, the hand and arm being extended as a means of lessening the abrupt contact of the body with the ground.

Reflex circulatory rarefraction of the bones of the hand is common in middle aged women and many elderly patients. This can be minimized by early activity of the fingers while in the splints and by judicious physical therapy. The constant fingering of a rubber sponge or of bouncing plastic putty is helpful.

(Continued on page 64)

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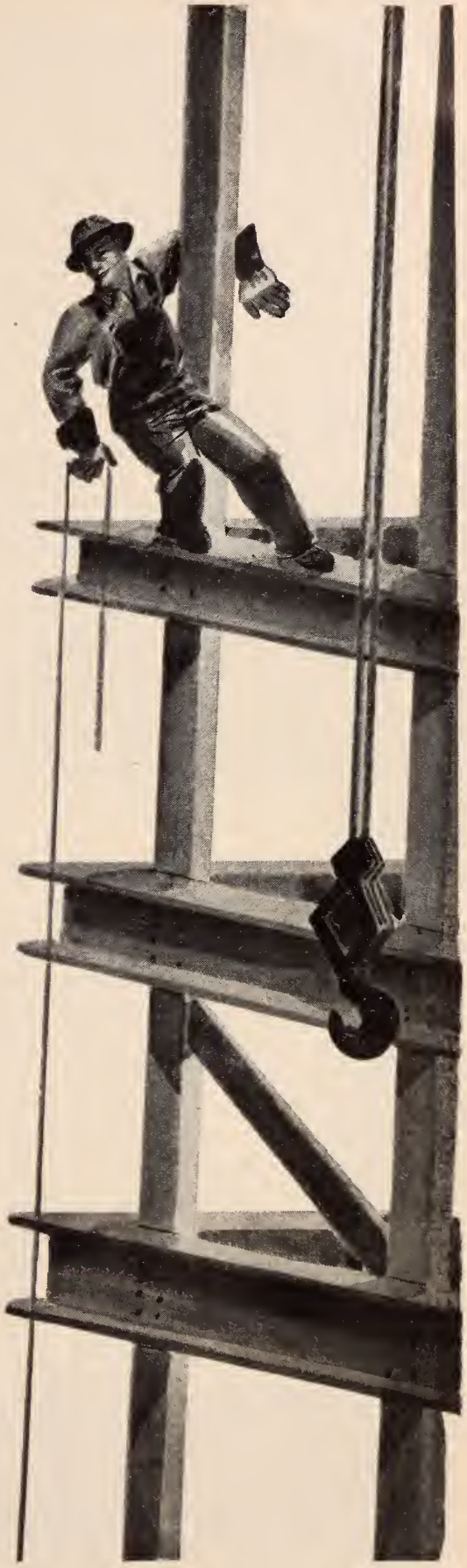
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Physical Medicine (Continued)

THE FUNDAMENTAL TREATMENT OF RHEUMATOID ARTHRITIS

J. J. R. Duthie, M.B., F.R.C.P. Ed. In THE PRACTITIONER, 166:991:22, January 1951.

The stage at which active movements should begin will depend upon the response to general and local rest. In the upper limbs, physical therapy should be prescribed only after pain and swelling have begun to subside. In the lower limbs, the period of complete immobility can be more prolonged, muscular function being maintained by static contractions of thigh and calf muscles with splints in position. The patient should be taught these exercises and instructed to perform them at frequent intervals throughout the day.

Physical therapy is used to supplement active forms of treatment. Wax baths are beneficial in reducing stiffness in the small joints of the hands and feet. Faradic footbaths may be helpful in initiating activity in the intrinsic muscles of the feet. Residual pain may be eased by radiant heat, infra-red rays, or short-wave diathermy. It must be clearly understood, however, that the value of passive forms of therapy is strictly limited. Power and stability can be restored to damaged joints only by skillfully graded activity. In cases of any duration, permanent damage will limit function, and patients must be warned that their activities must be kept within the tolerance of their joints.

When the patient has attained the maximum degree of improvement, certain clear-cut instructions must be given. The limits of physical activity must be clearly defined in those patients with significant residual disability. Instruction should be given in simple home physical therapy and remedial exercises.

LESIONS OF THE MUSCULOTENDINOUS CUFF OF THE SHOULDER: IV: SOME OBSERVATIONS BASED UPON THE RESULTS OF SURGICAL REPAIR

Harrison L. McLaughlin, M.D., and Edward G. Asherman, M.D., New York. In JOURNAL OF BONE AND JOINT SURGERY, 33-A:1:76, January 1951.

One hundred consecutive patients in whom shoulder-cuff repair was done were studied. These patients were followed for one to eleven years subsequent to repair, for an average exceeding three years.

At the beginning of the study, it was believed that the position of abduction facilitated the healing of a cuff tear. However, the accumulation of evidence demonstrated this so-called "conservative abduction treatment" to be not only unnecessary, but also harmful to the healing of the rupture, to the shoulder mechanism, and to the patient as a whole. Previous experiences with treatments requiring prolonged immobilization of the abducted arm demonstrated that these treatments often had a penalty more severe than that of the untreated original lesion.

A program designed to control pain and maintain the mobility of the shoulder proved to be the most efficient form of conservative treatment. A sling, and, if needed, a swathe were used during the acutely painful stages following injury. Both were discarded as soon as symptoms permitted. Appropriate palliative measures were employed as needed. Simple home measures of a palliative nature proved more efficient than formal physical therapy. Gradually, progressive active exercises and the resumption of use at frequent intervals up to, but not past, the limits of pain or fatigue, were insisted upon. Many in whom the diagnosis of cuff rupture was well established recovered on this regimen without further treatment.

PHYSICAL THERAPY AND REHABILITATION IN MULTIPLE SCLEROSIS

George G. Deaver, M.D., New York. In THE CRIPPLED CHILD, 30:4:11, December 1950.

In treating the multiple sclerotic patient by physical therapy and rehabiltation there are three important facts to consider: (1) The etiology of multiple sclerosis is unknown; therefore, we cannot treat the cause; (2) In the majority of cases it is a progressive disease and degeneration may take place faster than rehabilitation, no matter what therapy is used; (3) There are periods of remission when the patient may be without any evidence of the disease, but there also are periods of exacerbation when the patient will be severely disabled. Because of these facts it is difficult to measure adequately the results of treatment. Frequently a patient has a remission and the type of treatment being given during that period is given the credit for the improvement. However, physical therapy is very fre-

(*Continued on page* 66)


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Relationship of Stress to Autonomic Lability

Studies in psychosomatics have shown that functional disorders often are a result of the patient's inability to adjust to emotionally stressful situations (stressor factors).

Nervous tension and chronic anxiety, discharged through a labile Autonomic Nervous System, can cause somatic disturbance. [1,2] Such states may involve any one of the organ systems or several at one time. [1,3] The outline below relates gastrointestinal and cardiovascular symptomatology to the exaggerated response of the autonomic nervous system.

	Physiologic Effects of Autonomic Discharge	
	Sympathetic	Parasympathetic
Gastro-intestinal	Hypomotility Intestinal Atony Hyposecretion Reduced salivation	Hypermotility Gastrointestinal spasm Hypersecretion
Cardio-vascular	Rapid heart rate Peripheral vaso-constriction	Slow heart rate Vasodilatation
Functional Manifesta-tions	Palpitation Tachycardia Elevated B. P. Dry mouth—throat	Heartburn Nausea-vomiting Low B. P. Colonic spasm

Data here tabulated is from references [3,4,5,6,7], given below.

Diagnosis of functional disorder is supported by the following indications of autonomic lability:

Variable Blood Pressure
Body Temperature Variations
Changing pulse rate
Deviations in B. M. R.
Exaggerated Cold Pressure Reflex
Glucose Tolerance Alterations

Therapy in these cases is directed toward: 1) relief of symptoms by drug therapy (so making the patient more amenable to psychotherapy); 2) psychotherapeutic guidance in making adjustment to stressful situations and correction of unhealthy attitudes.

Clinicians who have studied these disorders, including those of the menopause, report that good therapeutic results are produced by combined adrenergic (ergotamine) and cholinergic blockade (Bellafoline) with central sedation (phenobarbital) [8,9,10]. A convenient preparation of this nature is available in the form of **Bellergal Tablets**. Functional disorders are long-term therapeutic problems; therefore, drug treatment by the following method is recommended: 5 or 6 tabs. per day for the 1st week; then gradually reduce to the smallest dose effective in maintaining the patient symptom free (average: 3 tabs. daily). Interrupt for 1 week out of every month to assess results.

1. Ebaugh, F.: Postgrad. Med. *4:* 208, 1948. 2. Wilbur, D.: J.A.M.A. *141:* 1199, 1949. 3. Williams, E. and Carmichael, C.: J. Nat'l. Med. Assoc. *42:* 32, 1950. 4. Goodman, L. and Gilman, A.: The Pharmacological Basis of Therapeutics, The Macmillan Co., 1941. 5. Katz, L. et al: Ann. Int. Med. *27:* 261, 1947. 6. Weiss, E. et al: Am. J. Psychiat. *107:* 264, 1950. 7. Alvarez, W.: Chicago Med. Soc. Bulletin, 581, 1950. 8. Rakoff, A.: A Course in Practical Therapeutics, Williams and Wilkins, 1948. 9. Karnosh, L. and Zucker, E.: A Handbook of Psychiatry, C. V. Mosby Co., 1945. 10. Harris, L.: Canad. M.A.J. *58:* 251, 1948.

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quently recommended for these patients, because the medical profession realizes that relaxing spastic muscles, strengthening weak muscles, retraining uncoordinated and ataxic movements, teaching ambulation and self-care activities is the function of those trained in physical therapy precedures.

When a physician prescribed physical therapy, it is essential that the physical therapist evaluate the symptoms, the extent of the disabilities and what the patient ean accomplish with his disabilities. With this information the physician and the physical therapist can outline a program and measure the results of treatment.

The forms of physical therapy most useful in treating the disabilities resulting from multiple selerosis are the physical modalities and teaching the ambulatory and self-care aetivities of daily living which the patient is able to learn. The physical modalities which have been found most useful are massage, hydrotherapy and exercise. There is no form of physical therapy as useful in the treatment of multiple sclerosis patients as active and passive movements.

CHRONIC DISEASE IN AN AGING POPULATION

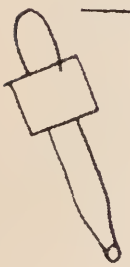
Howard A. Rusk, M.D., F.A.C.P., New York. In ANNALS OF INTERNAL MEDICINE, 33:6: 1341, December 1950.

In the minds of most internists, physical medieine and rehabilitation is a medical specialty which is primarily applicable to the speeialties of orthopedics, surgery and neurology, but which lacks a elose relationship to internal medicine. Until the last few years this concept was somewhat justified, for physical medicine was mainly concerned with the passive applieation of light, heat, water and massage, and, although widely used in the treatment of peripheral vascular diseases, arthritis and other disorders of particular interest to the internist, the greater emphasis was placed upon orthopedic and neurologic conditions.

However, during the past few years there has developed a new concept of physieal medieine and rehabilitation in which emphasis is placed not only on reducing the physical disability of the patient, but upon retraining the permanently

(*Continued on page* 68)

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disabled patient to live and to work as effectively as possible with those remaining physical capacities which he possesses.

The development of this new concept of dynamic therapeutics through rehabilitation had its genesis in the wartime programs for disabled servicemen. The need is now accentuated by the growing incidence of chronic disease resulting from an aging population. Lacking specifics to cure many of the chronic diseases, medicine must look to rehabilitation to teach the chronically disabled to live within the limits of their disabilities but to the hilt of their capabilities.

It is in the area of chronic disease that physical medicine and rehabilitation holds great implications for internal medicine, for probably three-quarters of the time of the average internist is spent on patients with chronic illness.

MANAGEMENT OF DECUBITUS ULCERS IN THE PARAPLEGIC PATIENT

Gordon S. Betterman, M.D., Charles S. Wise, M.D., and William Carey Meloy, M.D., Washington, D.C. In ARCHIVES OF PHYSICAL MEDICINE, 32: 1:34, January 1951.

Physical therapy methods are of considerable value in the prevention of decubitus ulcers. The use of luminous heat for 30 minutes twice daily to the more vulnerable areas will maintain more adequate vascular supply to skin and subcutaneous tissues. Care must be exercised, however, in the application of heat to these areas because of the anesthesia present, which would enhance the possibility of a burn. General application of ultraviolet irradiation for a minimal erythemal response, later followed by increased pigmentation, affords increased skin resistance to the formation of decubitus ulcers.

Physical reconditioning and training are highly valuable in the preoperative period. Exercises to provide strong upper extremity and trunk muscles should be started early. In most instances the patient can be and is best instructed in the use of braces and crutches before any plastic repair is done. Exercises increase the general and local circulatory efficiency. The successful rotation of a skin flap depends upon this local efficiency.

Early preoperative and postoperative ambulation has been found to be probably the most important single physical therapy aid in hasten-

(*Continued on page* 70)



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1. Herrmann, G.R.: Texas State J. Med. 42:260, 1946.
2. Leinwand, I., and Moore, D. H.: Amer. Heart J. 38:466, 1949.
3. Felch, W.C., and Dotti, L. B.: Proc. Soc. Exper. Biol. & Med. 72:376, 1949.

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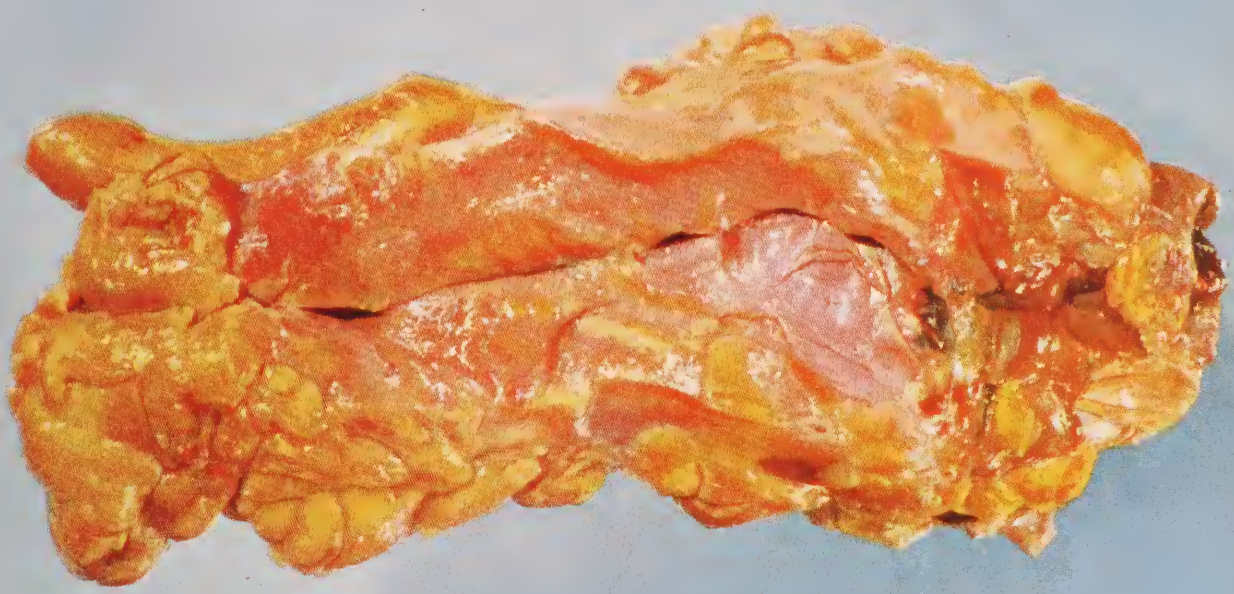
Physical Medicine (Continued)

ing healing processes. The effects of ambulation on nitrogen balance are well known, and our clinical experience indicates that the healing of plastic surgical procedures occurs much more rapidly in the semiambulant patient than in the patient who has been at prolonged bed rest.

On the seventh to the tenth postoperative day the patient may be braced and lifted from the cart to the floor without placing excessive pressure on the operative site. Full activity is resumed gradually. Very frequently ambulation with braces and crutches is permitted for a period of several weeks before the patient is allowed to sit in a wheel chair. During this period he is maintained on either a suitable Stryker frame or on a bed during the time that he is not ambulating. This is of particular importance after the repair of ischial decubitus ulcers.

INSULIN ATROPHY

One of the rarer complications of the administration of any type of insulin is fat atrophy occurring at the site of insulin injections. As the result of the disappearance of fat in the subcutaneous tissues, depressed areas appear. These are most unsightly and unfortunately these conditions are found most often in young women. No definite cause is known. Various hypotheses have been brought forth from time to time: destruction of fat by the preservative tricresol, the development of an enzyme which destroys the fat at the site of the injection, the traumatic action of insulin itself on fat tissues. Lamar suggests that these cases may show insulin resistance, brittle diabetes and allergy. Trauma seems to be the most plausible cause known. If a new area is used each day for many days in succession, the fat is likely to reappear and the depression fill in. Therefore, it is suggested that the method of frequently varying the site of the injection be used in these patients. Collens has suggested that continuing to inject insulin in the depressed areas will cause the abnormality to fill in. *Excerpt: The Newer Insulins and Some of the Complications of Insulin Administration, by H. B. Mulholland, M.D., Fred V. Vance, Jr., M.D., and Thomas S. Edwards, M.D., Charlottesville, Va., W. Va. M. J., Feb. 1951.*



Pancreas, weighing 300 grams, is about twice its normal size. There is a lobulated parenchyma disrupted by a marked interlobular fatty infiltration. Pathologist's diagnoses: "obesity; left ventricular hypertrophy; pulmonary edema and congestion; fatty infiltration of liver; fatty infiltration of pancreas."

The pancreas of an overweight patient

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Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

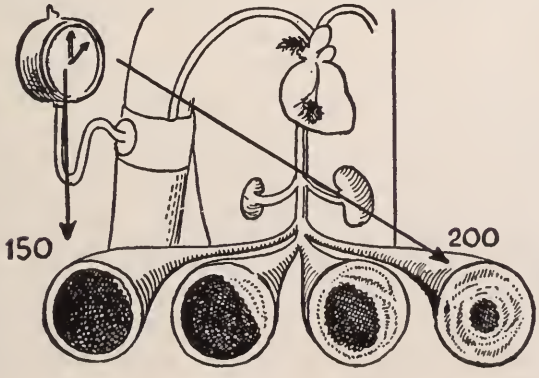
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages; diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

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For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

Bibliography

1. Sollmann: A Manual of Pharmacology, W. B. Saunders Co. (1942).
2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

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USE STREPTOKINASE, STREPTODORNASE IN MANAGEMENT OF INFECTIONS

The use of two biologic compounds to liquefy blood clots, pus and other waste products produced by certain types of infections and injuries, thus permitting their removal from the diseased area, is described in the March 3 Journal of the American Medical Association.

Removal of waste material from infected and wounded areas is a prime requisite for healing and growth of healthy tissue. Formerly an extensive operation was necessary to remove waste material from the chest cavity.

Drs. Joseph M. Miller, Milton Ginsberg, Raymond J. Lipin and Perrin H. Long of Johns Hopkins University School of Medicine treated 85 patients with streptokinase and streptodornase with excellent results in 80 cases. They said infection in the remaining five appeared to have advanced too far for effective treatment with the compounds. Drs. Miller, Ginsberg and Lipin are also associated with the Veterans Administration hospital, Fort Howard, Md.

Although streptokinase and streptodornase, excreted during the active growth of certain kinds of harmful bacteria, are not new compounds, they have been used only experimentally up to this time.

The types of injury or infection in which the compounds were found to be most effective were those characterized by clotting and the collection of pus and debris into walled off areas which produce a honeycomb-like partition of the infected tissue. Thirteen different kinds of infections were represented in the group of 85 patients, the most numerous being bedsores, rectal infections, amputated stump infections, pilonidal cysts with abscesses, soft tissue infections, and blood collections in the chest cavity.

The procedure in the use of these compounds is to inject the substances by needle into closed areas and to insert a nylon pack saturated with the substances into open infections and wounds. The walls of the honeycomb structure produced by the waste material are dissolved and liquefied, permitting any pus collection and waste materials to be drained away, the doctors explained.

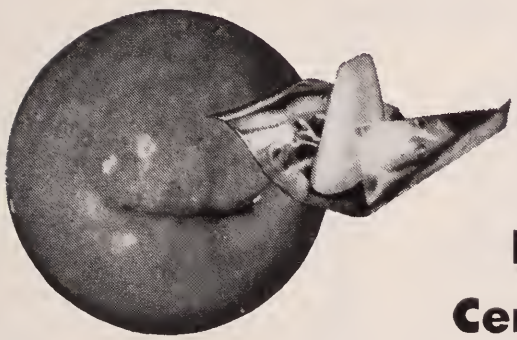
The doctors report there were no harmful effects on living, healthy tissue from the two compounds.

In many of our communities the large number of recalcitrant patients constitute a major problem in tuberculosis control. Surveys indicate that in some localities 35 per cent of those discharged from sanatoriums have signed out against advice. As possible sources of contagion these uncooperative patients pose grave problems for all agencies engaged in public health work. Not only are they a menace to their own families and the community but also to themselves since interruption of treatment usually results in exacerbation of their condition. Thomas N. Sheen, M.D., Nat. Tuberc. Bull., October, 1950.

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BOOK REVIEWS



BUCHANAN'S MANUAL OF ANATOMY. Edited by F. Wood Jones D. Sc. (Lond., Adelaide and Melb.), M. Sc. (Manch.), M. B., B. S., (Lond.), F. R. S., F. R. C. S. Eng., F. R. A. C. S. Sir William Collins, Professor of Human and Comparative Anatomy at the Royal College of Surgeons of England: sometime Professor on Anatomy in the University of Manchester. 8th edition. The Williams and Wilkins Company, Baltimore 1616 pages, 847 figures. 48 plates. 1950. $8.50.

The eighth edition since 1906 of this standard textbook of typographical anatomy has been revised without changing the format. The line drawings are excellent and the lack of color is no great disadvantage. The X-ray plates are important in emphasizing the clinical aspects of regional anatomy.

J. C. S.

POSTGRADUATE GASTROENTEROLOGY — As Presented in a Course Given Under the Sponsorship of The American College of Physicians in Philadelphia. December MCMXLVLLL: Edited by Henry L. Bockus, M. D., Professor of Gastroenterology, University of Pennsylvania Graduate School of Medicine. 670 pages with 258 figures. Philadelphia and London: W. B. Saunders Company, 1950. Price $10.00.

This is the publication in book form of a postgraduate course in gastroenterology given by The American College of Physicians in Philadelphia. The contributors are from the staffs of the local medical schools. There is no attempt to cover the entire field of gastroenterology, but special problems and recent advances are fully discussed.

The book is worthwhile for any practitioner who sees patients with gastrointestinal complaints. All sections are excellent: personally I thought the part on neuropsychiatry as applied to gastroenterology was quite practical. The only thing one might ask for would be a longer follow up on the excellent case studies.

J. C. S.

SURGERY OF THE EYE: INJURIES by Alston Callahan, B.A., M.S., (Ophth.), M.D., F.A.C.S. Professor of Ophthalmology, Medical College of Alabama and Director, Thigpen-Cater Eye Hospital, Birmingham, Alabama. Formerly, Chief, Eye Section, Northington General Hospital, Tuscaloosa, Alabama. 240 pages. 367 illustrations — 20 in full color. Charles C. Thomas, Publisher, Springfield, Illinois, U. S. A. 1950. Price $11.50.

This thoroughly helpful book dealing with surgical repair of injuries to the eye and its adnexa indicates wide experience and keen judgement by the author.

Photographs and diagrams of before, during and after surgery of actual cases fill the pages. The written text is adequate and is clearly worded. References to ophthalmic authorities are frequent, however this is a book of Doctor Callahan's experiences and his recommendations and instructions for the procedures he found most helpful.

This is an excellent book — the author's material and presentation and the physical make-up of the book itself. However this reader would venture a criticism relative the size and shape of the book.

The majority of medical books in the library of this reviewer measure about 9 to 10 inches high and about 7 to 8 inches across. This book has a height of over 11¼ inches; it measures nearly 9 inches across. This

(*Continued on page 78*)

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Post-Appendectomy	3 minutes
Post-Hemorrhoidectomy	3 minutes
Post-Tonsillectomy	2 minutes
Simple Headache	½ - 3 minutes
Menstrual Pain	5 minutes



Many other dramatic cases reported.

1. Hoffman, Murray M., Ill. Dent. Jl., 19:439-445 (Oct., 1950)

2. McNealy, Raymond W., Ill. Med. Jl., 97:150 (Mar., 1950)

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extra inch or more, in comparison with the average, makes for book shelf difficulty. Obviously the book will not occupy a flat position on a desk indefinitely, therefore, it is believed consideration should be given by the publisher to the production of a book which will fit well with the other units of a library.

The text is highly recommended for the reading and heeding of ophthalmic surgeons.

L. P. A. S.

BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

VIRUS AND RICKETTSIAL DISEASES. By S. P. Bedson, M.D., F.R.C.P., F.R.S., Professor of Bacteriology, London Hospital, A. W. Downie, D.Sc., M.D., Professor of Bacteriology, University of Liverpool, F. O. MacCallum, B.Sc., M.D., Director Virus Laboratory, Central Public Health Laboratory, C. H. Stuart-Harris, M.D., F.R.C.P., Professor of Medicine, University of Sheffield. Williams & Willkins Company, Baltimore, 1950. 383 pages. $4.50.

AMBULANCE ANECDOTES. By Temple Fay, M.D. Illustrations by "Marge". Charles C. Thomas, Publisher, Springfield, Illinois. 124 pages. $2.50.

WHEELER AND JACK'S HANDBOOK OF MEDICINE. Revised by Robert Coope, M.D., B.Sc., F.R.C.P., Physician, Liverpool Royal Infirmary; Consulting Physician, King Edward VII Sanatorium, Midhurst; Physician, Liverpool Hospital for Diseases of the Chest; Physician, Liverpool & North-Western Chest Surgical Unit; Visiting Physician, Maghull Epileptic Homes; Lecturer in Clinical Medicine, Lecturer in Applied Physiology and Lecturer in Clinical Chemistry, University of Liverpool; Examiner in Medicine to the Conjoint Board and in the University of Liverpool, and previously Examiner in the Universities of London and Aberdeen. Eleventh Edition. The Williams and Wilkins Company, Baltimore, 1950. 648 pages. $5.00.

DIABETES GUIDE BOOK FOR THE PHYSICIAN. Prepared by the Committee on Education of the American Diabetes Association, 11 West 42nd Street, New York 18, N. Y. 79 pages.

THE MICROKARYOCYTES, THE FOURTH CORPUSCLES AND THEIR FUNCTIONS. By K. G. Khorozian, A.B., M.S., M.D., Pineville, West Virginia. Meador Publishing Company, Boston. 969 pages. $12.00.

JOHN HUNTER. By S. Roodhouse Gloyne, M.D., (Leeds) Consulting Pathologist, London Chest Hospital and King Edward VII Sanatorium, Midhurst. The Williams and Wilkins Company, Baltimore, 1950. $3.50.

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POSTURAL HYPOTENSION

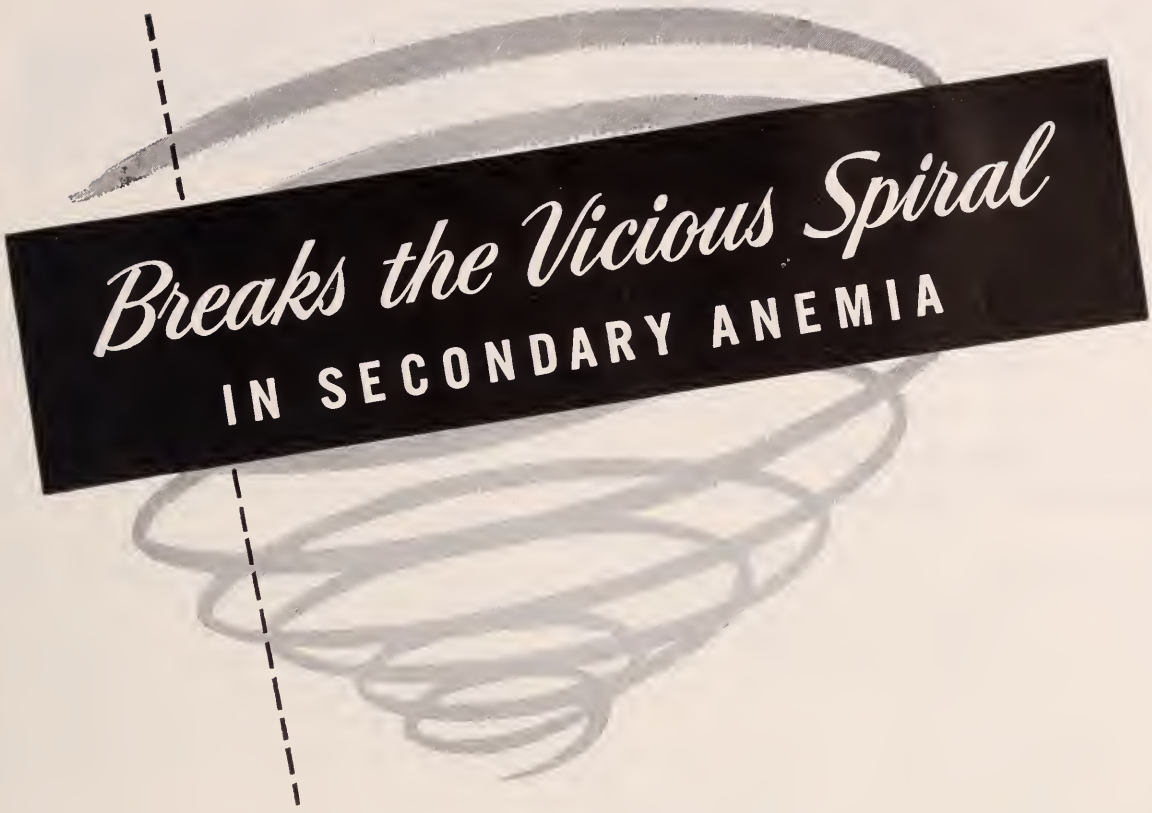
The problem of postural hypotension is a common and unsatisfactory one. The symptoms range from momentary dizziness to syncope. The most extreme case of which we have record is that of a 73 year old hypertensive widow who suddenly fainted for the first time on arising from her chair. This recurred time and time again and finally she was hospitalized for study. The recumbent blood pressure was 180 systolic, 110 diastolic; the blood pressure, when supported in upright position, was not obtainable. This patient remained bedfast and died of an intercurrent disease. The most common type is that recently presented by an arteriosclerotic woman of 65 who had a recumbent blood pressure of 130/90, but standing had a blood pressure of 90/80 and a pronounced tachycardia. Hip length rubber stockings, and abdominal support and sleeping in the so-called "head up position" have helped her. We felt that the latter maneuver would perhaps "tone up" the vasoconstrictor reflexes. *Excerpt: Cardiovascular Heart Disease, John F. Rainey, M.D., Anderson, S. C., J. S.C.M.A., Jan.* 1951.

INFANTILE ECZEMA

There are certain features of atopic eczema in children which require special mention. Mothers who breast-feed eczematous babies should omit eggs, avoid wheat, especially cereals as much as possible, avoid foods which commonly cause gastrointestinal distress or urticaria, and reduce their amount of milk consumption or drink goat's milk, since allergy to milk may be transmitted by the mother to the child. The omission of milk requires extra calcium in the diet. The eczematous infant should be fed every four to five hours throughout twenty-four hours, and usually at a single breast. This schedule prevents rapid gain in weight which is undesirable. *Excerpt: Treatment of Acute Allergy Met in General Practice, Fred W. Wittich, M.D., Minneapolis, S. Dak. Journal of Med. and Phar., January 1951.*

The prevention of tuberculosis by minimizing public contact with infectious persons begins exactly like the recipe for rabbit stew. "First, catch your rabbit." Miniature chest filming is the process which has recently made that first step economically possible on a broad scale. J. Michigan State M. Society, Ben R. Van Zwalenburg, M.D., November, 1949.





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REPORT ADVANTAGES OF ROOMING-IN PLAN FOR INFANTS

Rooming-in, the practice of keeping the newborn baby in his mother's room instead of in the hospital nursery, is advantageous to infants, parents and grandparents as well as to pediatricians and hospital administrators, writes Dr. Angus McBryde of Durham, N. C., in the March 3 Journal of the American Medical Association.

Dr. McBryde, pediatrician at Duke Hospital and Duke University School of Medicine, reports on the success of the rooming-in plan at the hospital since it was initiated three years ago. During that time, 2,067 infants have been born at the hospital with 1,862 of them being successfully kept in their mothers' rooms. The 205 babies, only 10 per cent, who were not kept in their mothers' rooms suffered from abnormalities or the condition of the mother was considered unfavorable to such an arrangement.

Giving a brief history of the development of hospital nurseries, Dr. McBryde brought out the fact that before 1890, babies were always kept in their mothers' rooms. However, the high incidence of infection in mothers made it necessary to remove the baby from close contact with the mother and nurseries were created. Today, as a result of modern obstetric methods infection in new mothers is rare and the advantages of keeping an infant close to his mother suggests a return to the practice of rooming-in.

The infant, Dr. McBryde said, benefits from the close physical contact with his mother by helping him adjust to his new world.

"Only by having him constantly near the mother, where she can hear and satisfy his demands, can he be without discomfort or distress," he added. "We encourage the mother to feel that crying represents the infant's need for her, in terms of either warmth or food, and so the infant may be taken into her bed at any time."

"The early closeness of the parent-child relationship, as it is initiated in rooming-in," he went on to say, "may be the first step in forming the proper close family relationship." He believes that strict adherence to rigid forms of child training and lack of affectionate treatment are often factors resulting in aggressive, maladjusted children.

The advantages of rooming-in for the mother begin, according to the article, "with the satisfaction and delight in meeting and handling her baby early."

Formerly, the article continued, mothers, as well as fathers, after returning home were afraid to handle their baby and were bewildered and anxious about his perfectly normal reactions, such as sneezing and crying, when he wanted anything from attention and food to a dry diaper.



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In contrast, the procedure at Duke Hospital is to bring the child directly from the delivery room into the mother's room where he is kept in a bassinet at her side during her entire stay at the hospital.

During the first 24 hours, staff members watch the infant closely as the mother has often received sedatives or is exhausted. At the end of 24 hours, however, the mother is usually ambulatory and may aid in the care of the child if she wishes.

Dr. McBryde reports almost "universal approval" of the rooming-in plan by mothers in both the wards and private rooms. Bery few mothers, he said, fail to take advantage of the opportunity to help care for the baby.

Caring for the infant is made convenient for the mother. All equipment for the baby is kept on an enamel tray on a table near her bed. The plan has been found to be satisfactory and approximates the usual home arrangement, Dr. McBryde said.

The fact that mothers now have more confidence in their ability to care for their children as a result of the rooming-in arrangement is shown by the 90 per cent decrease in telephone calls from new mothers during their first week at home, he pointed out.

Visitors are limited to the father and grandparents, who are allowed to visit whenever they wish and may aid in the care of the infant so long as they wash their hands and are free from infection.

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ROOMING-IN (Continued)

toward their babies has been noted by Dr. McBryde. "They begin to share the responsibility at once and therefore do not feel that care of their infant is completely in the mothers' province during the early months."

He concluded: "Now that such a large percentage of infants are born in hospitals, it behooves all of us to make that process as safe and sane as possible. It is hoped that hospitals in the future will be built without nurseries for normal newborn infants who are born of healthy mothers."

ARMY ANNOUNCES EARLY SUCCESSES WITH NEW INTRAMEDULLARY PIN

An improved technique in the Army's treatment of femur fractures has been tried out for several weeks in Tokyo Army Hospital "with uniformly satisfactory results over this short period" according to Major General R. W. Bliss, Army Surgeon General.

The new intramedullary pin eliminates the need of a cast. When inserted through the end of a fractured femur into and along most of the length of the marrow cavity, the patient can bear weight on his leg almost immediately after fracture reduction. Present Army practice, however, requires him to rest for at least two weeks. By using crutches, the patient is then able to exercise and even do light work. When the fracture has healed, an incision is made at the upper end of the femur, and the pin is then withdrawn.

The new bone pin promotes faster growth of new bone tissue, permits earlier fixation of the bone, and avoids joint stiffness and muscular atrophy associated with immobilization of the leg in a cast. The patient's ability to walk early and care for himself early in convalescence is a potent morale factor, and represents a great gain to the Army in terms of medical manpower and hospital space.

The bone pin has been used thus far only in connection with breaks in the femur. The Army surgeons in Tokyo are eager to test it in healing fractures of the lower leg, the Surgeon General said. Colonel John R. Wood, MC, chairman of the Army Medical Research and Development Board, promised that the pins and the tools necessary for their use will be dispatched to the Far East as fast as they can be fabricated and shipped. They may also be used soon for fractures of the bones of the arm.

The adoption of the intramedullary bone pin as standard throughout the Army Medical Service must await further investigation. The experience of five or six weeks is not enough to justify standardization of the item. However, if the pin should continue to show the same good results over a reasonable length of time, it will then be considered for use throughout the Army.

This work was preceded by a joint development and clinical testing program at the research level. Partici-

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pating were various Army and civilian doctors who coordinated their findings through the subcommittee of orthopedic surgery of the National Research Council.

Services that reduce the reservoir of tubercle bacilli among human beings in any community will lessen the number of new cases of tuberculosis. Every active case of tuberculosis or potentially infectious case discovered and brought under treatment and supervision is a step forward in reducing this reservoir of human tubercle bacilli. In the aggregate these measures represent the weight that is bringing about the control of this disease in our state and nation. New England J. Med., Robert B. Kerr, Frank G. Seldon, John D. Spring, November 30, 1950.

Over 25 million persons suffer from some disabling or nondisabling chronic ailment. Measured in any terms the chronic diseases are a staggering national burden, a major source of insecurity and of loss of national income. The most important of the chronic diseases are heart diseases, arteriosclerosis, high blood pressure, nervous and mental diseases, arthritis, kidney disease, tuberculosis, cancer, diabetes and asthma. Although the incidence of chronic disease increases with age and the progressive aging of our population is one of the factors responsible for the growing importance of the problem, it is important to remember that chronic illness occurs at all ages. Vlado A. Getting, M.D., Dr.P.H., Am. J. Pub. Health, October, 1950.

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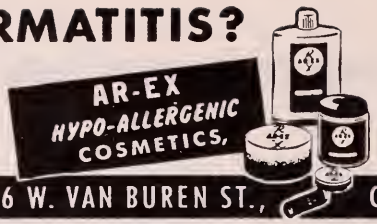
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PHYSICIANS AS CITIZENS

Doctors have a right to feel a bit proud of the part they played, be it large or small, in the November elections. But we cannot relax; past laurels never won a future battle. Let doctors, again as individuals through their informal committees rather than as organized medical societies, keep their political muscles exercised and supple. They have recently proved that they are "citizens first, doctors second." Let them continue to be a force for politicians to reckon with through the years. *Excerpt: Editorial, Rocky Mountain M. J., Dec. 1950.*

MY GREATEST MISTAKE— AND ITS LESSON

"'Write for me' said the Editor—'Write for me an article on the mistake which taught you a lesson.' On the face of it, an easy request to comply with, and me with the experience of over thirty years of practice to draw upon. There was, for instance, the time when a stranger came to my consulting room at the end of a busy winter's day. He was one of those annoying sort of people who submit a train of symptoms and receive the appropriate advice, and then start off on another and completely different track, usually with the opening gambit of '. . . and whilst I am here, doctor, I'd like to ask you about . . .' Well—I had dealt faithfully with this man's 'Bronchial chest', and then he thought he had better ask me about his rheumatic knee. I was tired and a little fed up but made a perfunctory examination of his knee and told him it was nothing much to worry about and gave him some Lin. Alb. with which to rub it. A day or two later, I was told by a mutual friend that Alderman So-and-so had been on a trial visit to me, was not sufficiently impressed by my rapid dismissal of his symptoms concerning this knee, and did not think he would like me for his family doctor. The lesson?—that the last patient is as important as the first, and that however tired one is, one must never show it as long as one is supposed to be working. If you are really too tired to do your work properly, then stop working rather than lower your standard and lose your reputation." *Medicine Illustrated,* 4:12, Dec. 1950.

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Children, adolescents and adults enjoy taking Mulcin directly from the spoon. For infants, the dose may be mixed with formula. fruit juice or water.

Ingredients of quality, skilled formulation and meticulous manufacturing controls are combined to make Mulcin a product of pharmaceutical elegance and a distinguished new member of Mead's vitamin family.

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The ILLINOIS Medical Journal

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VOL. 99 NO. 5

May, 1951

Obesity—
Diagnosis and Treatment

Clinical Correlation of the Electrocardiogram

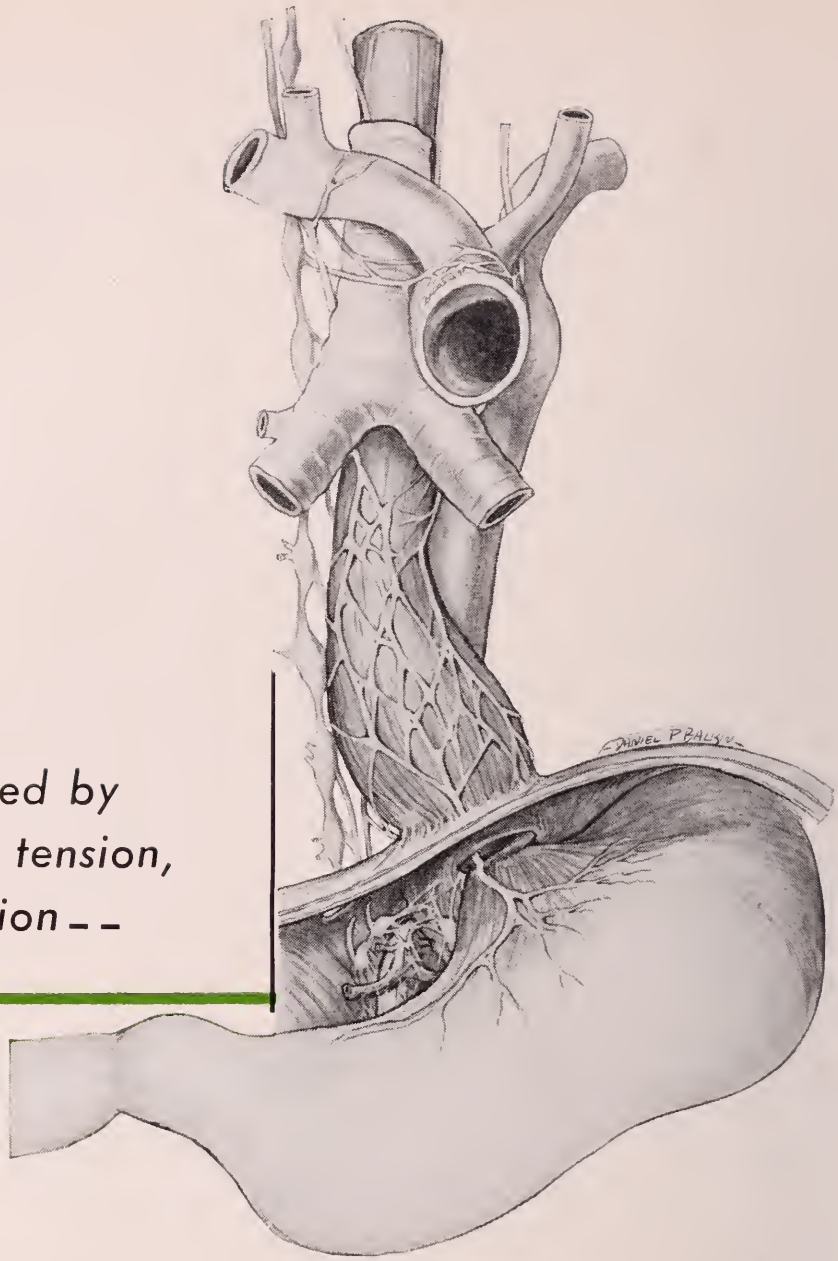
Birth Marks

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OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

SPASTIC STATES - -

accompanied by irritability, tension, apprehension - -



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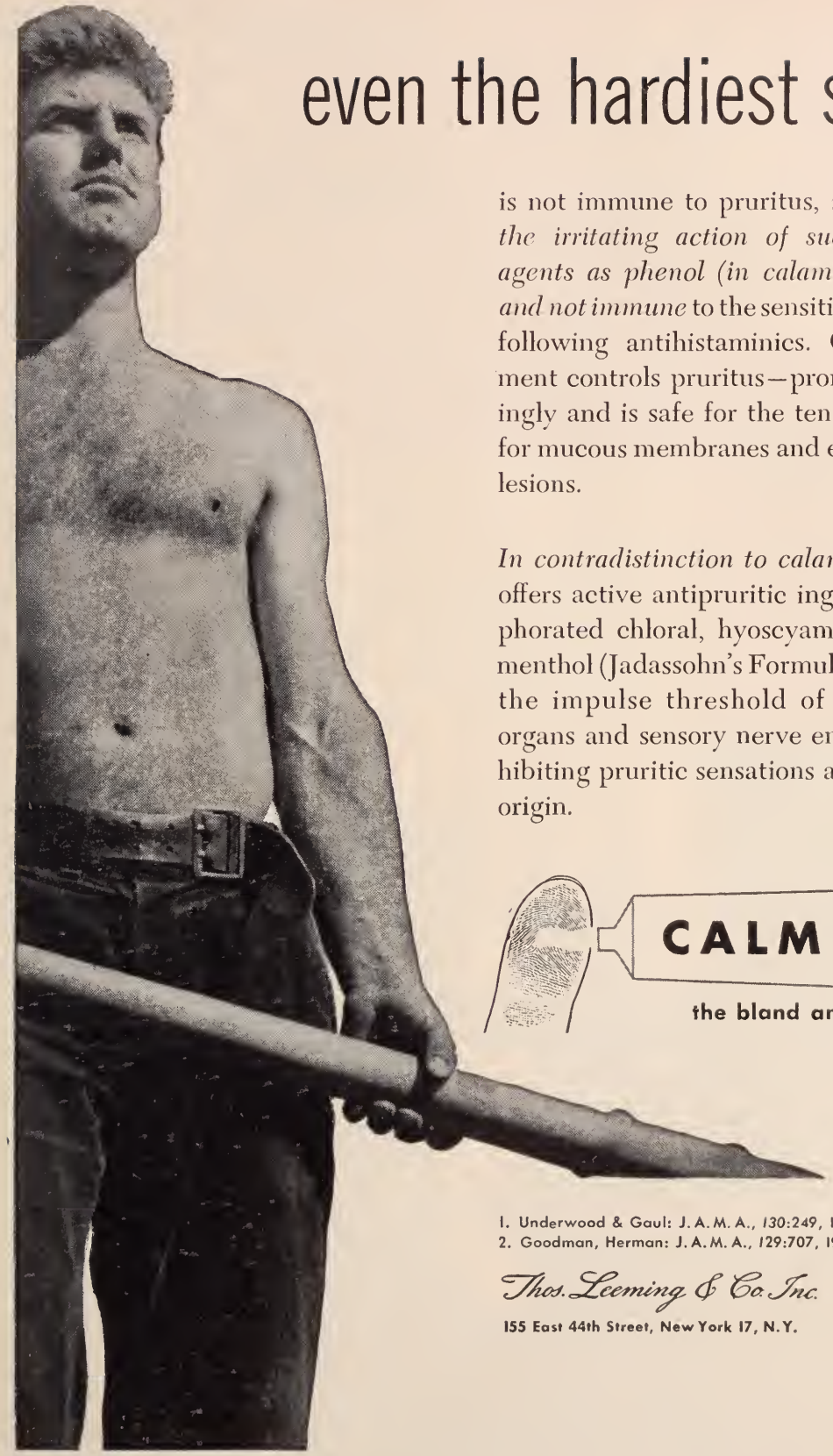
For the medical management of gallbladder disease, Pavatrine with Phenobarbital is useful in conjunction with the hydrocholeretic, Ketochol.

PAVATRINE® with PHENOBARBITAL

(β-diethylaminoethyl fluorene-9-carboxylate hydrochloride)

RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

Entered as Second-Class Matter July 21, 1919, at the Post Office, Oak Park, Illinois, under the Act of March 8, 1879. Acceptance for mailing at special rate of postage provided for in section 1102, Act of October 8, 1917, authorized July 15, 1918. Office of Publications, 715 Lake Street, Oak Park, Ill.



even the hardiest skin...

is not immune to pruritus, *nor immune to the irritating action of such antipruritic agents as phenol (in calamine* $\overline{c}$ *phenol),*[1] *and not immune* to the sensitization reported following antihistaminics. Calmitol Ointment controls pruritus—promptly and lastingly and is safe for the tenderest of skins, for mucous membranes and even excoriated lesions.

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1. Underwood & Gaul: J. A. M. A., *130*:249, 1946.
2. Goodman, Herman: J. A. M. A., *129*:707, 1945.

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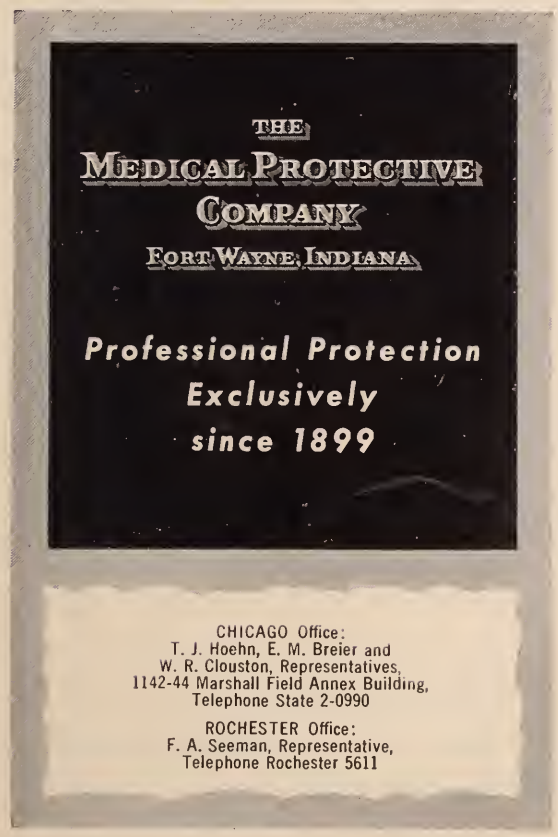
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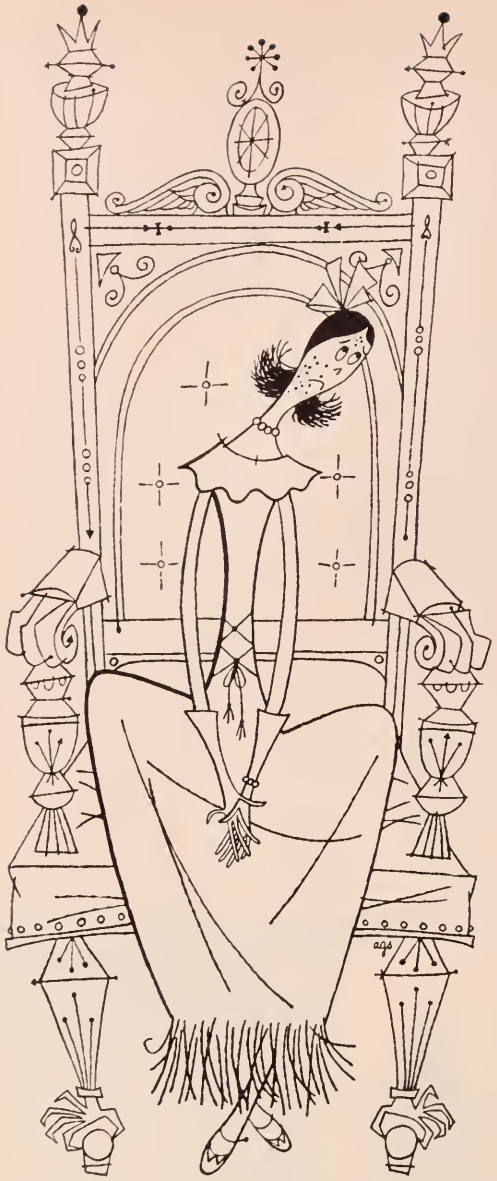
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to help

your acne patient

get back "in the swing"



Your complexion-conscious young acne patient regains her self-confidence when you write 'ACNOMEL'. Because ACNOMEL is:

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Formula: Resorcinol, 2%; and sulfur, 8%; in a stable, grease-free, flesh-tinted vehicle.

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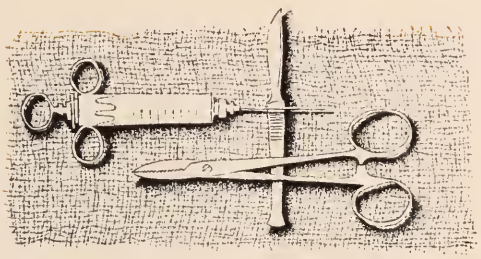
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a significant advance, clinical and cosmetic, in acne therapy

Effective against many bacterial and rickettsial infections, as well as certain protozoal and large viral diseases.

AUREOMYCIN

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The Surgeon is no longer hampered in his work by the fear of uncontrollable postoperative infections, thanks in large measure to the sulfonamides and the antibiotics. Aureomycin is indicated for preparation of the gut before enteric surgery. The high concentrations attained by aureomycin in the bile make it of particular value in operations on the infected biliary tract. Its efficacy against streptococci and staphylococci, which are becoming increasingly resistant to penicillin, renders its use advisable in surgical conditions where these organisms are actual or potential invaders.

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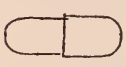
Capsules: Bottles of 25 and 100, 50 mg. each capsule. Bottles of 16 and 100, 250 mg. each capsule.
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For the Common Anemias...



The Squibb **RUBRA** Family

	RUBRAMIN *per cc.*	RUBRAFOLIN *per capsule*	RUBRATON *per teaspoonful*	RUBRAFERATE *per capsule*
				
VITAMIN B_{12}	**15, 30 & 50** micrograms	**25** micrograms	**4.17** micrograms	**4.17** micrograms
FOLIC ACID		**1.67** milligrams	**0.28** milligrams	**0.28** milligrams
IRON			**220** milligrams ferric ammonium citrate	**130** milligrams ferrous sulfate exsic.
VITAMIN C				**50** milligrams
DOSAGE THERAPEUTIC	15 to 30 micrograms daily for a week or more; when neurologic involvement is present, 50 micrograms or more daily.	1 or 2 capsules daily	2 teaspoonfuls t.i.d.	2 capsules t.i.d.
MAINTENANCE	Generally, 30 to 50 micrograms twice a month; when neurologic involvement is present, 50 micrograms a week.	1 capsule daily	1 teaspoonful t.i.d.	1 capsule t.i.d.
SUPPLY	1 cc. ampuls, 15 & 30 micrograms of vitamin B_{12} per ampul. 5 & 10 cc. vials, 30 micrograms per cc. 10 cc. vials 50 micrograms per cc.	Bottles of 100	Pint and gallon bottles	Bottles of 100

NOTE: The above are average doses. As with all antianemia preparations, dosages must be adjusted to meet the needs of the individual patient.

Also available: Solution Rubramin Crystalline (Squibb Crystalline Vitamin B_{12} Solution) in 1 cc. ampuls, 15 micrograms of crystalline vitamin B_{12} per ampul, and 10 cc. vials, 30 micrograms of crystalline vitamin B_{12} per cc.

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SQUIBB MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

in the menopause...

"...a striking improvement in the sense of well-being," was reported after "Premarin" therapy.*



*Gloss, S. J., and Rosenblum, G.: J. Clin. Endocrinol. 3:95 (Feb.) 1943

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Estrogenic Substances (water-soluble) also known as Conjugated Estrogens (equine) Tablets and Liquid.

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"SLEEP OFF" *hypertension...*

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Merrell
1828
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When vasodilation alone is indicated. *Nitranitol.* (½ gr. mannitol hexanitrate.)

When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combines Rutin 20 mg. with above formula.)

When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline.* (½ gr. mannitol hexanitrate combined with ¼ gr. Phenobarbital and 1½ grs. Theophylline.)

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'Roche'

antibacterial action plus...

■ greater solubility

Gantrisin is a sulfonamide so soluble that there is no danger of renal blocking and no need for alkalinization.

■ higher blood level

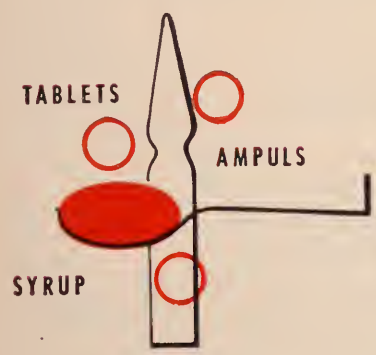
Gantrisin not only produces a higher blood level but also provides a wider antibacterial spectrum.

■ economy

Gantrisin is far more economical than antibiotics and triple sulfonamides.

■ less sensitization

Gantrisin is a single drug—not a mixture of several sulfonamides—so that there is less likelihood of sensitization.



GANTRISIN®—brand of sulfisoxazole
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NEW VERILOID* COMBINATIONS

INDICATED IN ALL DEGREES OF HYPERTENSION

.....especially for those difficult-to-control patients



VERILOID WITH PHENOBARBITAL AND MANNITOL HEXANITRATE

Each scored tablet contains:	Veriloid	2 mg.
	Phenobarbital	15 mg.
	Mannitol hexanitrate	10 mg.

This combination of hypotensive agents, Veriloid-VPM, produces an excellent response in all degrees of hypertension. It is particularly valuable in the management of patients who exhibit low tolerance to plain Veriloid or in whom dosage regulation has proved difficult.

Many More Patients Can Now Be Helped—Veriloid-VPM lowers blood pressure through the potent hypotensive action of Veriloid—a distinctive, biologically assayed fraction of Veratrum viride—and the vasorelaxing properties of mannitol hexanitrate. Phenobarbital serves to minimize emotional tension and appears to raise the nausea threshold.

With Veriloid-VPM, the incidence of side actions is negligible. *Many patients who cannot tolerate plain Veriloid are able to take this new dosage form in therapeutically active amounts.*

Administration—While individualization of dosage is essential for best results, the average dose of one to one and one-half tablets four times daily after meals and at bedtime usually produces a good response.

VERILOID WITH PHENOBARBITAL

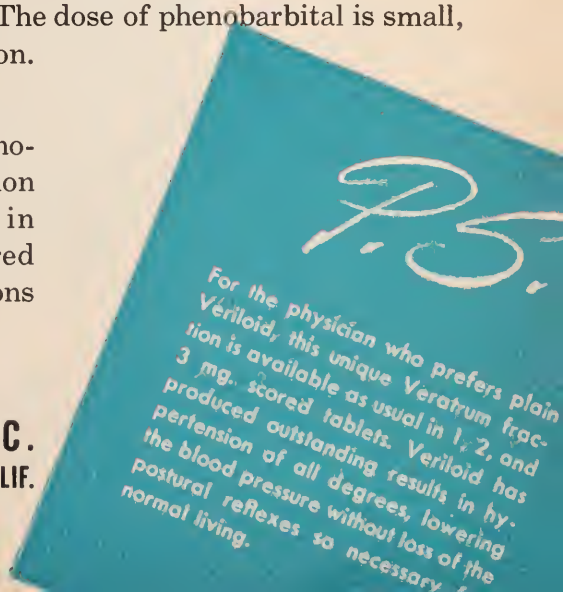
Containing 2 mg. of Veriloid and 15 mg. of phenobarbital per scored tablet, this combination is indicated when the action of mannitol hexanitrate is not desired.

Veriloid With Phenobarbital exhibits the superior tolerability of Veriloid-VPM. Well tolerated, it makes for easier dosage regulation and a negligible incidence of side actions. The dose of phenobarbital is small, avoiding drowsiness or excessive sedation.

* * * *

Veriloid-VPM and Veriloid With Phenobarbital are available on prescription through all pharmacies. Supplied in bottles of 100, 500 and 1,000 scored tablets. Literature on both combinations available on request.

*Trade Mark of Riker Laboratories, Inc.



RIKER LABORATORIES, INC.
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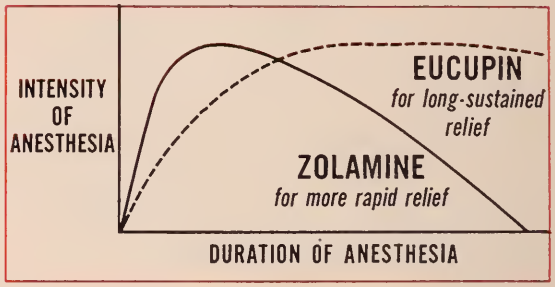
Now... more rapid, more sustained relief of earache

New combination of complementary local analgesics, *quick-acting* zolamine and *long-acting* Eucupin, gives more rapid and more sustained relief of otalgia.

As compared to benzocaine and chemically related compounds, zolamine and Eucupin are more potent and therefore produce a clinically more desirable local analgesic effect.

Otodyne is slightly viscous, thus adherence of the active ingredients to the epidermal surface is promoted. Hygroscopic action effects mild decongestion.

NEW—two analgesics combined for complemental effect



Formula:

Zolamine (N, N-dimethyl-N'2-thiazolyl-N'-p-methoxybenzyl-ethylenediamine)	1%
Eucupin® dihydrochloride*	0.1%
Polyethylene glycol	q. s.

Dropper bottles of ½ fluid ounce (15 cc.)

White's OTODYNE® NEW ANALGESIC EAR DROP



WHITE LABORATORIES, INC.
Pharmaceutical Manufacturers, Newark 7, N. J.

*"Eucupin"—Brand of isoamylhydrocupreine is a registered trademark of White Laboratories, Inc.

Wyeth®



One Tablet corresponds to one Teaspoonful (4 cc.)

Thus, the physician can select the form of medication best suited to his purpose—the delicious elixir, or the handy-to-carry tablets.

In nervousness and fatigue, a judicious combination of low dosage sedation and high dosage B-complex therapy often provides gratifying relief. BĒPLETE supplies both adjuncts, including vitamin B_{12}.

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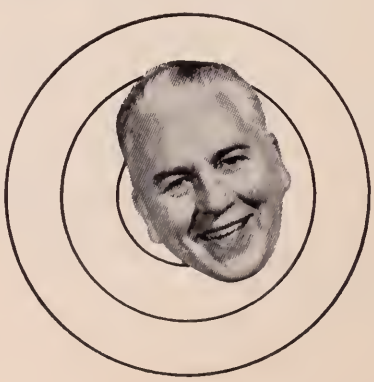
to ameliorate mood... to relieve inner tension

'DEXAMYL'—a balanced combination of 'Dexedrine'* and Amobarbital, Lilly ('Amytal'†)—provides the beneficial effects of both its two components:
The 'Dexedrine', because of its "smooth" and profound antidepressant action, restores mental alertness and optimism and dispels psychogenic fatigue.
The Amobarbital (Lilly), because of its calming action, relieves nervous tension, anxiety and agitation.
Combined in DEXAMYL, the two components work together synergistically to control troublesome symptoms of mental and emotional distress. Widely useful in everyday practice, 'Dexamyl' tablets are available in bottles of 100 and 1000. Each tablet contains 'Dexedrine' Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg., and Amobarbital (Lilly), ½ gr. (32 mg.).

Smith, Kline & French Laboratories, Philadelphia

Dexamyl*

*Trademark, S.K.F.
†Trademark, Lilly



liver disorders

diabetes

atherosclerosis

coronary occlusion

hypertension

obesity

nephrosis

Hypercholesterolemia is often found in liver disease, diabetes, atherosclerosis and its associated coronary occlusion, hypertension, obesity and nephrosis.†

Accumulating evidence shows that lipotropic therapy, as available in Methischol, will help to normalize cholesterol and fat metabolism. By reducing elevated blood cholesterol levels in most patients, lipotropic therapy may "prevent or mitigate" cholesterol deposition in the intima of blood vessels. In liver disorders, lipotropic factors reduce excess fatty deposits and encourage regeneration of new liver cells.

newly improved lipotropic formula

methischol

now contains added lipotropic vitamin B_{12}

suggested daily therapeutic dose of 9 capsules or 3 tablespoonfuls provides:

Choline Dihydrogen Citrate	2.5 Gm.*
dl-Methionine	1.0 Gm.
Inositol	0.75 Gm.
Vitamin B_{12}	9 mcg.
Liver Concentrate and Desiccated Liver	0.78 Gm.**

*present in Methischol Syrup as 1.15 Gm. choline chloride
**present in Methischol Syrup as 1.2 Gm. Liver Concentrate

Supplied in bottles of 100, 250, 500 and 1000 capsules, and 16 oz. and 1 gallon syrup.

†*Write for literature and samples*

U. S. vitamin corporation

Casimir Funk Laboratories, Inc. (affiliate)
250 East 43rd St., New York 17, N. Y.

FOR THE FIRST TIME

aqueous natural vitamin A in capsules

AQUASOL A CAPSULES is the first and only product to provide water-soluble natural vitamin A in capsules . . . and is made by the "oil-in-water" technique developed in the Research Laboratories of the U. S. Vitamin Corporation (U. S. Pat. 2,417,299).

AQUASOL A CAPSULES

two potencies:

25,000 U. S. P. Units
natural vitamin A per capsule
. . . in water-soluble form

50,000 U. S. P. Units
natural vitamin A per capsule
. . . in water-soluble form

advantages:

up to 400% greater absorption

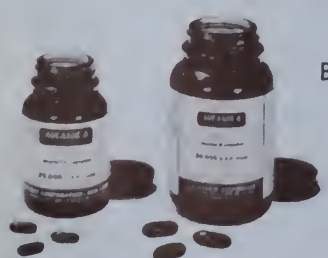
80% less excretion

85% higher liver storage

indications:

for more rapid, more effective therapy in all vitamin A deficiencies . . . particularly those associated with conditions characterized by poor fat absorption (dysfunction of the liver, pancreas, biliary tract and intestines; celiac and other diarrheal diseases).

Proven effective in ACNE and other dermal lesions responsive to high potency vitamin A.



Bottles of 100, 500 and 1000 capsules

Samples upon request

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Sodium Gentisate: A New Approach to the Treatment of Arthritis

It has been estimated[1] that nearly 7,000,000 people in the United States have some form of "rheumatic" disease. Rheumatism (with arthritis the most important single cause) ranks first in prevalence among diseases, and second in the production of disability and invalidism. It is more common than the total number of cases of tuberculosis, diabetes, cancer and heart disease combined.

The most common of the severe forms of the arthritides is rheumatoid arthritis. Since Klinge's[2] original work in 1929, evidence has been accumulating that both rheumatic fever and rheumatoid arthritis are diseases of the interfibrillar substance of the connective tissue[3]. The nature of this material is not well understood, although it is presumably a mucopolysaccharide in combination with a protein. This theory holds that changes in the cellular components are secondary to changes in the interfibrillar material. The composition of two of the mucopolysaccharides found in interfibrillar material is known: (a) chondroitin sulfuric acid and (b) hyaluronic acid[4].

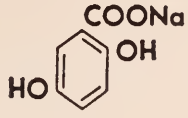
Changes in the hyaluronic acid of the joint fluid have been shown to be present in active rheumatoid arthritis[5,6]. These changes in active disease involve a depolymerization of the hyaluronic acid. The excessive presence of hyaluronidase, moreover, has been acknowledged to produce a denaturization of mucin in the synovial fluid, the varying degrees of which are valuable for their diagnostic as well as prognostic indications[7]. Clinicians[8] have concluded that the increase of hyaluronidase activity may be responsible for the breakdown of interfibrillar cement.

A rational approach to the problem, therefore, demands a therapeutic agent that will act to inhibit the spreading effect of hyaluronidase. Gentarth Tablets provide just such an agent, sodium gentisate.

Meyer and Ragan[9] treated patients having rheumatoid arthritis and acute rheumatic fever with sodium gentisate. Their results were uniform and notably favorable. Within a few days there followed a disappearance of pain, swelling and joint inflammation.

The favorable therapeutic effects of sodium gentisate have been confirmed by other investigators,[10,11] Gorsuch[12] reporting that the "therapeutic efficacy of sodium gentisate has exceeded that of salicylates and its antirheumatic properties apparently exceed those of an analgetic and antipyretic action".

The increase in urinary glucuronic acid observed with salicylates does not occur with gentisates. This phenomenon has been assigned to the rapid oxidation of the gentisates[13]. It is indeed likely that the antirheumatic action of the salicylate in forestalling the spread of hyaluronidase[14] is attributable to its partial oxidation in the body to a gentisate.



SODIUM GENTISATE

The corrective action of sodium gentisate is generally not an immediate one; therefore, as an added therapeutic measure, a salicylate, which provides prompt relief from pain, should be included in the formula.

Boyd *et al.*[15] treated 80 patients suffering from different arthritic diseases with sodium gentisate combined with salicylates and also with salicylates alone; they found the gentisate-salicylate composition (GENTARTH) to be the more effective, with best results following its use in patients suffering from rheumatoid arthritis and fibromyositis. The relief afforded by the sodium gentisate component in these diseases appears to be unmistakable. These investigators also found GENTARTH to be remarkably free from toxic effects, no untoward symptoms having developed in any patient. This finding confirms the observations of Mulinos[16] that GENTARTH has a very low order of toxicity, both chronic and acute, in animals.

The product of choice, therefore, should be GENTARTH Tablets prepared by the Raymer Pharmacal Company of Philadelphia, pioneer producers of gentisate medication.

Each salol-coated GENTARTH Tablet contains:

Sodium Gentisate	100 mg.
Raysal	325 mg.
(representing 43% Salicylic Acid and 3% Iodine in a Calcium-Sodium Phosphate Buffer Salt Combination)	
Succinic Acid	130 mg.

The recommended dosage is two to four tablets three or four times daily (after meals and before bedtime).

GENTARTH Tablets are supplied in bottles of 100, 500 and 1,000 and are available at all pharmacies on prescription.

1. Hench, P. S. et al.: Ninth Rheumatism Review, Ann. Int. Med., 28:66 (1937).
2. Klinge, F. & Grzimek, N.: Virchow's Arch. f. Path. Anat., 284:646 (1932).
3. Meyer, K.: Phys. Rev., 27:335 (1947).
4. Comroe, B. I.: Arthritis and Allied Conditions, Phila., Lea & Febiger, 4th Ed. (1949).
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Send request for sample and literature on your prescription form to Raymer Pharmacal Company, Philadelphia 34, Pa.

(Advertisement)





calcium

phosphor

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iron

a new product

the Ca:P ratio is the key

A uniformly high calcium-phosphorus ratio . . . adjusted in BREMIL to a guaranteed minimum of 1½ parts calcium to 1 part phosphorus . . . this is the nutritional key to the prevention of hypertonicity, hyperirritability, and other tetanic symptoms in infants.

Gardner, Butler, et al., state: "Relative to human milk, cow's milk has a low Ca:P ratio . . ."[1] Nesbit writes: "Tetany of the newborn is now recognized as a definite entity . . . and often accompanied by an increased phosphorus and lowered blood calcium."[2] Dodd comments that "hypocalcemia tetany in the newborn may be of serious consequence."[3]

BREMIL . . . newest product of Borden research . . . is a completely modified milk in which nutritionally essential elements of cow's milk have been adjusted in order to supply the nutritional requirements of infants deprived of human milk. BREMIL is therefore a human milk replacement to which physicians can turn with confidence for uninterrupted good results.

uman milk	Bremil (reconstituted)	
034%	0.078%	
5 mg.	768 mg.	per qt.
15%	.052%	
8 mg.	512 mg.	per qt.
041%	.078%	
0 mg.	750 mg.	per qt.
0018%	.00082%	
mg.	8 mg.	per qt.

But an adjusted Ca:P ratio is not the only attribute that makes Bremil new and unique

BREMIL has the fatty acid and amino acid patterns of human milk . . . the same carbohydrate (lactose) . . . vitamin adjustments to meet the recommended standards of infant nutrition[4] . . . a soft, flocculent curd of small particle size comparable to human milk . . . complete solubility.

Just as with human milk you can start the infant on BREMIL the day it is born. Standard dilution is 1 level tablespoonful and 2 fl. oz. water, although BREMIL can be either concentrated or diluted. Each level tablespoonful BREMIL powder supplies 44 calories. BREMIL is easy to prepare and can be mixed for a single feeding or a 24-hour period.

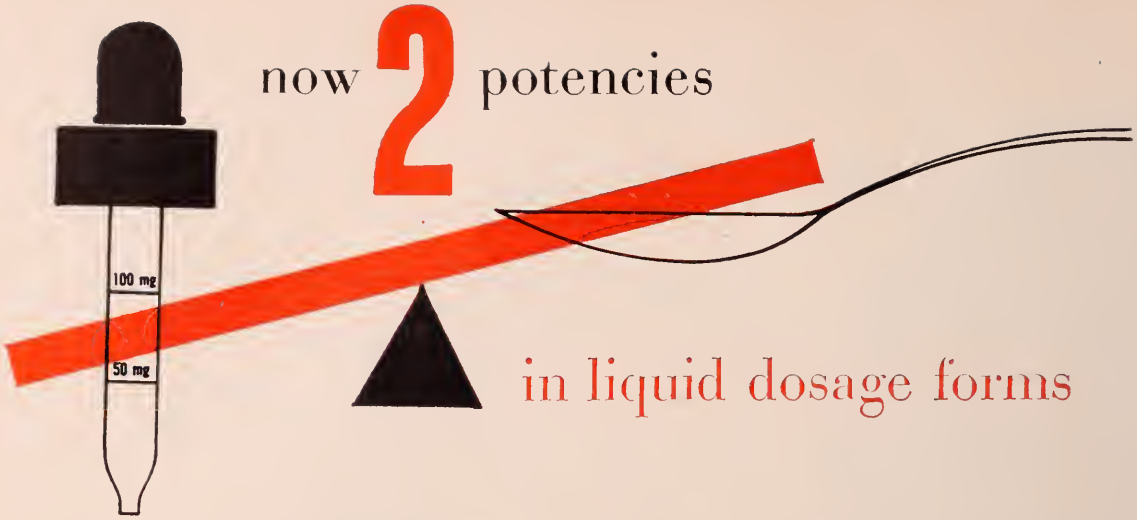
Complete information and a trial supply may be obtained upon request. BREMIL is available in drugstores in 1 lb. cans.

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e, palatable, easy to prepare **Bremil** *powdered infant food*

Prescription Products Division

The **Borden** Company, *350 Madison Avenue, New York 17*



now 2 potencies in liquid dosage forms

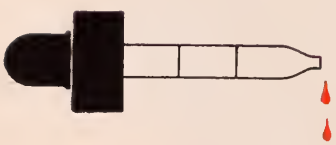
for greater convenience and flexibility in therapy

1. CRYSTALLINE Terramycin HYDROCHLORIDE

ORAL DROPS

The Only Broad-Spectrum Antibiotic Available in Drop-Dose Form provides 200 mg. of Crystalline Terramycin Hydrochloride per cc.; approximately 50 mg. of Crystalline Terramycin Hydrochloride in each 9 drops.

Supplied: Crystalline Terramycin Hydrochloride Oral Drops, in 10 cc. bottles with specially calibrated dropper.



Drops and Elixir



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Cherry-color appeal
and
cherry-mint flavor
to encourage
adherence to the
prescribed regimen.

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**Formerly Terrabon*

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The Only Broad-Spectrum Antibiotic Available As An Elixir. Each teaspoonful (5 cc.) provides 250 mg. of Crystalline Terramycin Hydrochloride.

Supplied: Crystalline Terramycin Hydrochloride Elixir, in bottles containing 1 fl. oz.

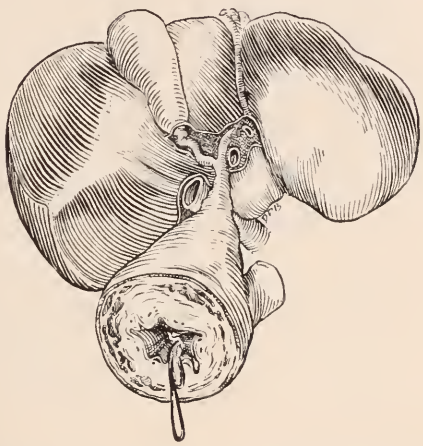
The availability of these 2 potent liquid concentrates now permits a further simplification of dosage schedules in mild and severe infections, and with patients at all age and weight levels.

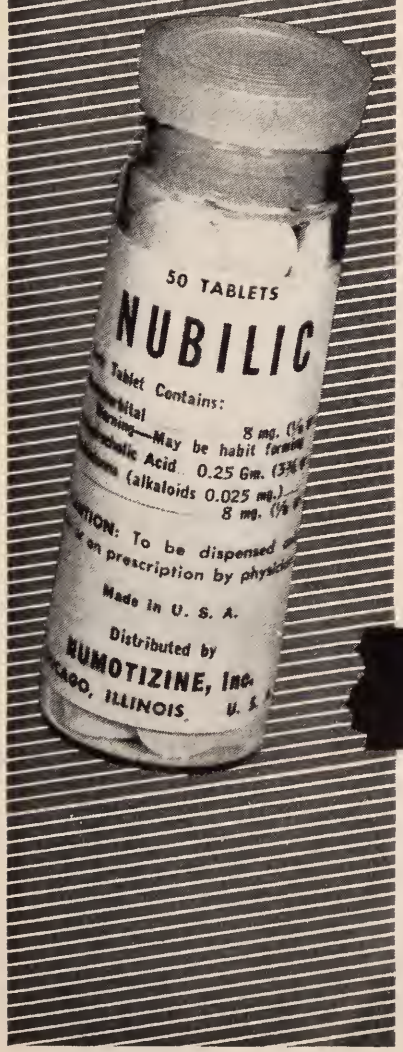
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NUBILIC contains dehydrocholic acid, an efficient hydrocholeretic agent which thins the liver bile and flushes the biliary passages.

NUBILIC contains belladonna, which encourages free drainage and relaxes the sphincter of Oddi. This action is further enhanced by the central sedation of phenobarbital.

NUBILIC

Each Nubilic Tablet contains:

Dehydrocholic acid	0.25 Gm. (3¾ gr.)
Phenobarbital	8 mg. (⅛ gr.)
Belladonna	8 mg. (⅛ gr.)

Bottles of 25, 50 and 100 tablets

NUMOTIZINE, Inc.

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TRUE STIMULANT THERAPY

The therapeutic efficacy and clinical safety of ACTHAR derive from the fact that it *stimulates* secretion of all three types of cortical hormones—all of vital importance in stress situations.

Quick-acting and quickly metabolized, ACTHAR is free of cumulative effects when administered in proper dosage and with proper spacing of injections. The speed of onset of therapeutic action is a significant advantage in acute conditions.

ACTHAR is the preparation of choice in those diseases requiring maintenance therapy. ACTHAR permits uninterrupted, continuous therapy without rest periods, since it functions as the true physiologic stimulus to the adrenal cortex and does not cause adrenal involution.

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Literature and directions for administration of ACTHAR, including contraindications, available on request.

ACTHAR is available in vials of 10, 15, 25 and 40 I.U. (mg.). The Armour Standard of ACTHAR is now accepted as the International Unit, 1 International Unit being equivalent to 1 milligram of ACTHAR.

ACTHAR

THE ARMOUR LABORATORIES BRAND OF ADRENOCORTICOTROPIC HORMONE (A.C.T.H.)

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

ACTHAR





SALT HORMONES

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Physiologic agents that control the mobilization and utilization of energy; regulate retention of sodium and chloride and the excretion of potassium; prevent breakdown of body protein. They inhibit cellular injury and the concurrent inflammatory reaction common in a wide variety of diseases.

A Preferred Nasal Decongestant and Vasoconstrictor

Otorhinolaryngologists frequently express preference for Neo-Synephrine hydrochloride to alleviate turgescence and nasal congestion in colds, sinusitis and various forms of rhinitis.

"When considerable nasal obstruction exists, relief may be obtained by the instillation of some shrinking agent into the nose . . . as for example Neo-Synephrine hydrochloride (¼%)"[1]

A "desirable preparation of this type has been perfected in Neo-Synephrine hydrochloride. It may be used for local application in the nose in ¼ to 1% solution."[2]

Neo-Synephrine's "desired effect occurs within from two to fifteen minutes . . ."[3]

"Its action is sustained for two hours or more."[3]

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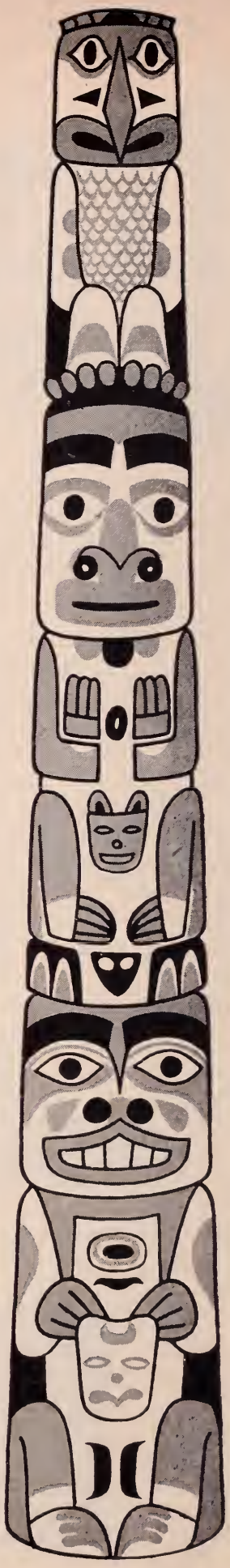
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1. Tuft, L.: Clinical Allergy. Philadelphia, W. B. Saunders Co., 1947, pp. 335-336.
2. Hansel, F. K.: Allergy of the Nose and Paranasal Sinuses. St. Louis, C. V. Mosby Co., 1936, p. 769.
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with **CODEINE PHOSPHATE***

gr. $\frac{1}{8}$-No. 1 gr. $\frac{1}{4}$-No. 2 gr. $\frac{1}{2}$-No. 3 gr. 1-No. 4

**12 times more soluble than sulfate*



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simply prescribe Minacap

Dietary supplementation with vitamins, iron and calcium is now conveniently attained with a single prescription for Minacap* capsules. This new Upjohn preparation is a capsule within a capsule supplying vitamin B_{12} factors, riboflavin, calcium pantothenate, nicotinamide, ferrous sulfate, purified bone phosphates, thiamine, pyridoxine, folic acid, ascorbic acid, vitamins A and D during periods of increased need such as pregnancy and lactation, convalescence, and growth.

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"Infants have a particular claim to oral penicillin since they . . .
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Editorial, Brit. M. J. 2:962, 1947

'ESKACILLIN 100', containing 100,000 units of penicillin per teaspoonful (5 cc.), and 'ESKACILLIN 50', containing 50,000 units of penicillin per teaspoonful—are the ideal penicillin preparations for infants and children because they can be given by mouth . . . and are so pleasant-tasting.

Among the many indications for ESKACILLIN are:

Acute sinusitis	Pneumonia
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Tonsillitis	Gonorrhea
Otitis media	Certain skin infections

Eskacillin 100
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the unusually palatable liquid penicillins for oral use



'Eskacillin' T.M.
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Future "Muscle Man"

Proteins are "muscle builders" that promote rapid growth and good tissue turgor. With HI-PRO, you can increase protein intake to high levels—yet keep the fat intake *low*. The HIGH PROTEIN-LOW FAT content provides a full quota of calories without danger of fat irritation in infants whose fat tolerance is low, or for those infants in which digestive disturbances are present.

HI-PRO is a palatable, readily digestible basic milk food prepared by blending spray-dried cow's milk and partially delactosed skim milk. Readily usable in infant formulae or mixed with other foods for the older child or adult.

HI-PRO Approx. Analysis

Protein	41.0%
Fat	14.0
Lactose	35.0
Minerals	6.5
Moisture	3.0
Calcium (Ca)	1.15
Phosphorus (P)	1.65
Potassium (K)	1.17
Calories per oz. (3 tbsp.)	121
Calories per tbsp.	40
Protein per oz.	11.7 grams
Protein per tbsp.	3.9 grams



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MEYENBERG EVAPORATED GOAT MILK

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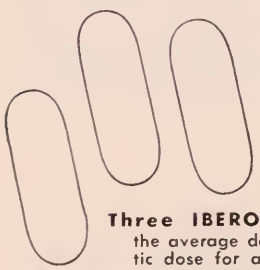


when a vacation is not a vacation

HER family told her she needed a "good rest." Her physician would have told her that while there is much to be said for a sun-filled vacation, it cannot rebuild depleted hemoglobin.

• Specific therapy for these common hypochromic anemias is elemental iron, approximately 70 mg. three times daily. Three IBEROL tablets supply this therapeutic dose of iron plus generous amounts of other blood-building elements—the B vitamins including B_{12} and folic acid, stomach-liver digest to conserve the hematopoietic factors and ascorbic acid for its nutritional value and for its reported action as a reducing agent for the iron. • For prophylaxis in pregnancy, old age or convalescence, one or two tablets are usually sufficient. In pernicious anemias, IBEROL may be used as a supplemental hematinic to established antipernicious anemia treatment. Your pharmacy has an ample supply of IBEROL in bottles of 100, 500 and 1000 sugar-coated red tablets.

Abbott



Three IBEROL Tablets: the average daily therapeutic dose for adults, supply:

Ferrous Sulfate	**1.05 Gm.**
(representing 210 mg. elemental iron, the active ingredient for the increase of hemoglobin in the treatment of iron-deficiency anemia)	
Plus these nutritional constituents:	
Thiamine Mononitrate (6 times MDR*)	6 mg.
Riboflavin (3 times MDR*)	6 mg.
Nicotinamide (2 times RDA†)	30 mg.
Ascorbic Acid (5 times MDR*)	150 mg.
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.

*MDR—Minimum Daily Requirement.
†RDA—Recommended Daily Dietary Allowance.

Specify

IBEROL® tablets

(IRON, B_{12}, FOLIC ACID, STOMACH-LIVER DIGEST, WITH OTHER VITAMINS, ABBOTT)

...n ever-widening field of indications...

...life-saving hormone in Addison's disease, CORTATE, Schering's desoxy-...rticosterone acetate, has produced satisfactory results in the *experimental* ...eatment of

SURGICAL SHOCK

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RADIATION SICKNESS

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(Desoxycorticosterone Acetate U.S.P.)

...PSYCHOSES

RHEUMATOID ARTHRITIS

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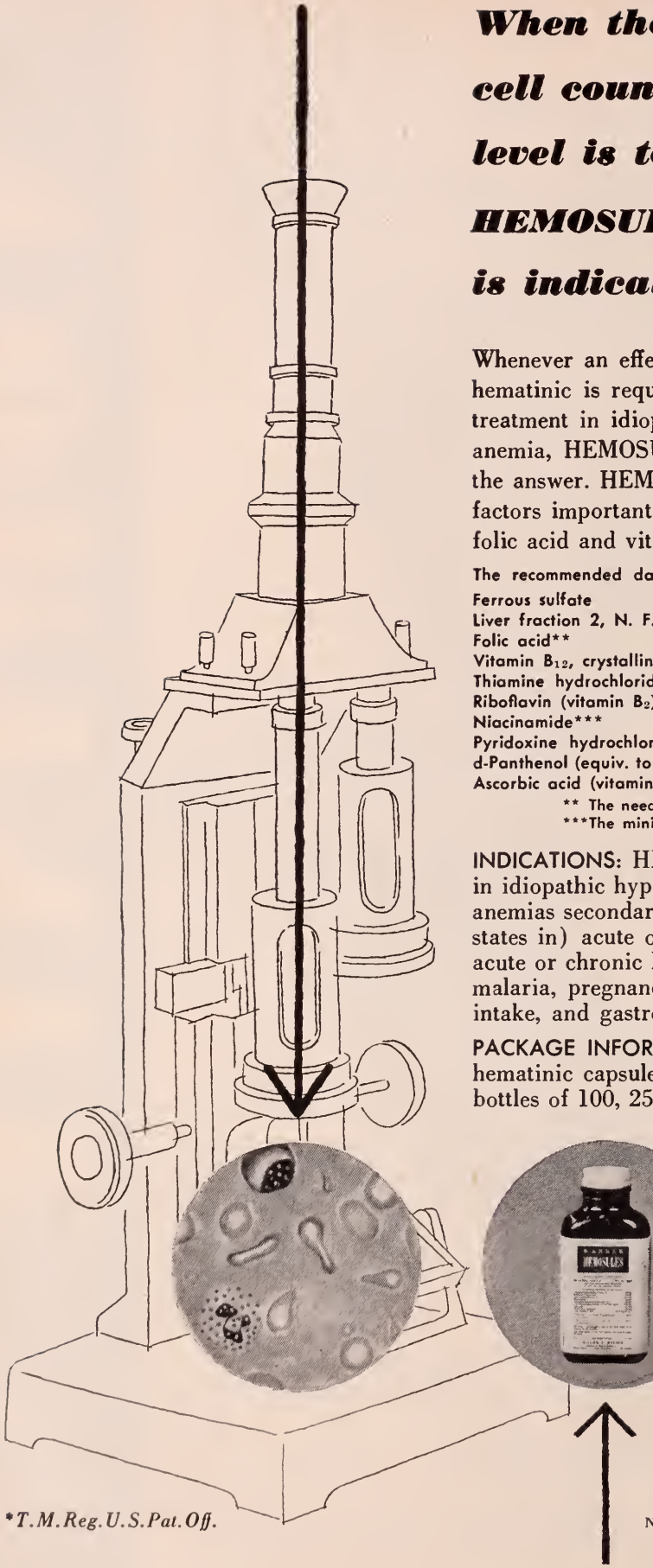
HYPEREMESIS GRAVIDARUM

...intramuscular injection, CORTATE in oil; for absorption via the oral mucosa, ...RTATE Buccal Tablets and CORTATE-SUBLINGUAL Solution; for subcutaneous ...plantation, CORTATE Pellets.

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CORTATE

SCHERING



When the red blood cell count or hemoglobin level is too low

HEMOSULES* *'Warner'*

is indicated

Whenever an effective, reliable, and well-tolerated hematinic is required for prophylaxis or treatment in idiopathic or secondary hypochromic anemia, HEMOSULES* 'Warner' capsules are the answer. HEMOSULES* contain all the nutritional factors important to erythrogenesis including folic acid and vitamin B_{12}.

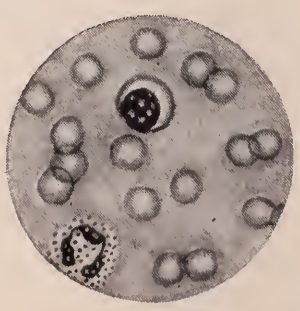
The recommended daily dosage of 6 HEMOSULES* provides . . .

Ferrous sulfate	(15 grs.)	972.0 mgs.
Liver fraction 2, N. F.	(15 grs.)	972.0 mgs.
Folic acid**		1.2 mgs.
Vitamin B_{12}, crystalline**		6.0 mcgs.
Thiamine hydrochloride (vitamin B_1)		6.0 mgs.
Riboflavin (vitamin B_2)		6.0 mgs.
Niacinamide***		24.0 mgs.
Pyridoxine hydrochloride (vitamin B_6)***		3.0 mgs.
d-Panthenol (equiv. to 3.0 mg. pantothenic acid)**		2.82 mgs.
Ascorbic acid (vitamin C)		90.0 mgs.

** The need in human nutrition has not been established
***The minimum daily requirement has not been established.

INDICATIONS: HEMOSULES* 'Warner' are indicated in idiopathic hypochromic anemia and hypochromic anemias secondary to (resulting from iron deficiency states in) acute or chronic infection, malignancy, acute or chronic blood loss, parasitic infection, malaria, pregnancy, hypothyroidism, inadequate iron intake, and gastrointestinal disease; and chlorosis.

PACKAGE INFORMATION: HEMOSULES* 'Warner,' hematinic capsules, are available in bottles of 100, 250, and 1,000.



WILLIAM R. WARNER
Division of Warner-Hudnut, Inc.
NEW YORK LOS ANGELES ST. LOUIS

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Rhus Desensitization

POISON-IVY DERMATITIS



TOOLS—Illustration shows (1) single vial of IVYOL® containing the purified active principle of *Rhus toxicodendron* (1:1,000) in sterile oil; (2) small syringe fitted with 24-gauge needle

Prophylaxis and Treatment

TIMING *For Prophylaxis:* one vial (0.5 cc.) intramuscularly, each week for four weeks.

Susceptible persons should be desensitized in the spring—well before the season begins.

For Treatment: in average cases, one vial (0.5 cc.) intramuscularly, every 24 hours until symptoms are relieved.

In case of unusually great susceptibility, as shown by severe or extensive eruptions from slight exposure, the amount of active principle contained in one vial, given in one dose, might aggravate the symptoms. It is advisable, therefore, in cases of this type, to begin with an initial dose of 0.1 to 0.25 cc. Subsequent doses are increased or repeated as indicated by the reaction.

TECHNIC Injections are made with a 24-gauge needle into the muscle or deep subcutaneous tissue. Before the injection is made, the needle should be wiped free of IVYOL extract to avoid skin irritation. Immediately after use, the syringe and needle should be cleansed by repeatedly drawing undiluted alcohol in and out through the needle while still attached to the syringe. Sharp & Dohme, Philadelphia 1, Pa.

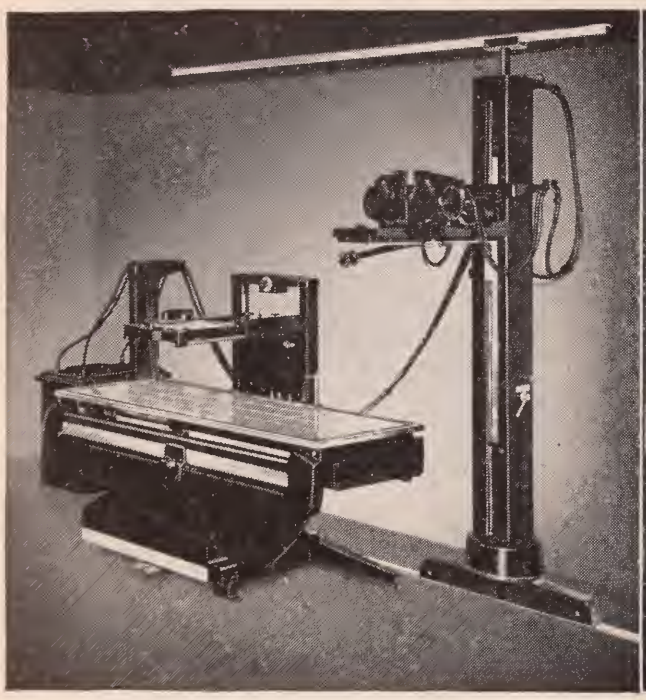
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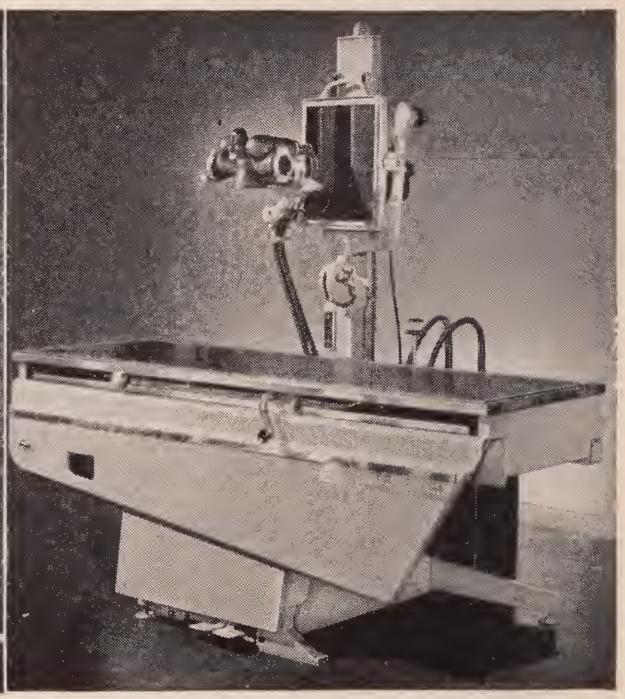
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packages of one and four 0.5-cc. vials.

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When the diagnosis is Pyelitis

First:

consider



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to establish and maintain urinary antisepsis...

To establish and maintain urinary antisepsis, MANDELAMINE* is many times preferred because it is quickly effective against the organisms most commonly encountered in urinary-tract infections. Its exceptional freedom from untoward reactions and its wide range of antibacterial activity commend it for use as soon as the diagnosis has been made.

Urinary antisepsis is often achieved in uncomplicated pyelitis in as few as three days. Speedy recovery is thus secured in many cases without necessitating higher-cost therapy.

Renal insufficiency is the only major contraindication to MANDELAMINE therapy.

MANDELAMINE is available in bottles of 120, 500, and 1,000 enteric-coated tablets, through all prescription pharmacies. Comprehensive literature and samples for clinical trial will be furnished to physicians on request.

NEPERA

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Pharmaceutical Manufacturers
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What about
premenstrual tension?



How many of your patients
give evidence
of heightened tissue-turgor
with fluid retention
in premenstrual period?

How many of
these patients
suffer from headache, nausea,
backache, nervousness,
malaise or
abdominal distention?



The symptoms of the premenstrual state can now be controlled safely and quickly...



—combines in each tablet 50 mg. of N,N-Dimethyl-N'-(2-pyridyl)-N'-(p-methoxybenzyl) ethylenediamine 8-bromotheophyllinate [pyrabrom]—with 100 mg. of acetophenetidin, the dependable, safe analgesic. M-MINUS 4 has evidenced dramatic effectiveness in clinical studies. Patients taking M-MINUS 4 have experienced relief of all symptoms in a very short time. There is good evidence that the administration of M-MINUS 4 has prevented the accumulation of abnormal amounts of fluid in the tissues.

Dosage—One tablet three times a day for three to five days before onset of menses.

Bottles of 24 and 100 tablets

Literature and a prescription package of 24 tablets will be sent upon request.

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LABORATORIES
DIVISION NUTRITION RESEARCH LABORATORIES, INC.
CHICAGO 11, ILLINOIS

Tolanate

BRAND OF INOSITOL HEXANITRATE

CSC

A Newly Available Organic Nitrate for the Management of Hypertension

Tolanate, making available for clinical use the therapeutic virtues of inositol hexanitrate, finds wide usefulness in the management of hypertension. It has been shown to be particularly valuable in essential hypertension and the hypertension of the menopause. One of its most desirable clinical features is the complete absence of "nitrite headache," expanding its applicability to many patients who cannot tolerate other organic nitrates.

LOWER DOSAGE The average dose of Tolanate is 10 mg. three or four times daily. This quantity has been found to produce a clinically acceptable drop in tension in most patients.

PROMPT SUBJECTIVE RELIEF The distressing subjective symptoms of hypertension are promptly relieved by Tolanate. The general vasodilation resulting from the relaxation of the arteriolar smooth musculature aids in improving tissue nutrition and function.

PROLONGED SUSTAINED ACTION Inositol hexanitrate, the active ingredient of Tolanate, is one of the longest acting organic nitrates known. Hence administration every 4 to 6 hours maintains a uniform, continuous depression of the blood pressure.

Tolanate is supplied in 10 mg. tablets in bottles of 100 and 1000. Also available as Tolanate with Phenobarbital, each tablet containing 10 mg. of inositol hexanitrate and 16 mg. (¼ gr.) of phenobarbital.

C.S.C. Pharmaceuticals

A DIVISION OF COMMERCIAL SOLVENTS CORPORATION, 17 EAST 42ND STREET, NEW YORK 17, NEW YORK

Effective Help

for Your

Hay Fever

Patients



As the distressing hay fever season approaches, the strikingly effective action of Neo-Antergan® can bring your patients the comfort of relief from symptoms. Its benefits in safely relieving symptoms of allergy are available only through your prescription. *Neo-Antergan is the physician's product, advertised exclusively to the Medical Profession.*

Your local pharmacy stocks Neo-Antergan Maleate in 25 mg. and 50 mg. coated tablets, in bottles of 100, 500, and 1,000.

NEO-ANTERGAN®

MALEATE

(Brand of Pyrilamine Maleate)
(Formerly called Pyranisamine Maleate)
(N-p-methoxybenzyl-N',N'-dimethyl-N-a-pyridylethylenediamine maleate)

COUNCIL ACCEPTED

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Manufacturing Chemists
RAHWAY, NEW JERSEY



for relaxation of reflex spasm

You may provide prompt relief for many of your patients suffering from hemiplegia, Parkinsonism, low back pain and other neuromuscular disturbances by prescribing Oranixon 'Organon'—the first Council-accepted brand of mephenesin. Try Oranixon for some of your patients whose outlook seems hopeless—patients whose mentality and motor functions are "imprisoned" by their reflexes. You'll find that Oranixon has the unusual action of quieting overactive reflex motor centers without interfering with voluntary actions or normal reflexes. You can usually relax spasm and rigidity within a few days by prescribing 3 to 5 grams of Oranixon per day. Oranixon is available in 250-mg and 500-mg oral tablets and in an elixir containing 400 mg of mephenesin per teaspoonful.

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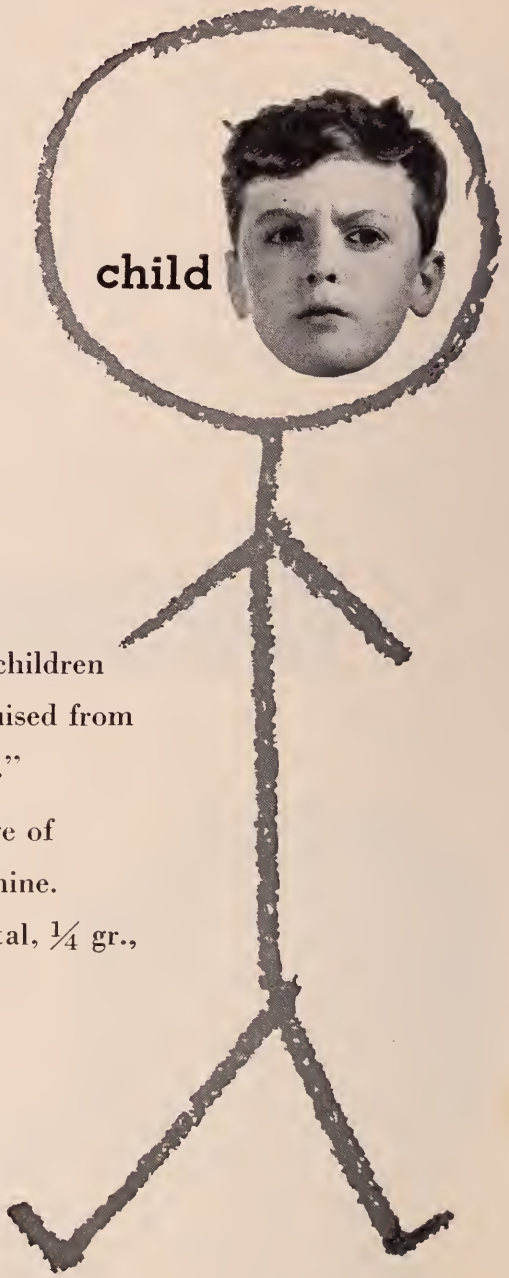
FORMULA:	each cc. (approx. 20 drops) contains:	each teaspoonful (4 cc.) contains:
Thiamine Hydrochloride	2.5 mg.	10.0 mg.
Riboflavin	0.5 mg.	2.0 mg.
Pyridoxine Hydrochloride	0.15 mg.	0.6 mg.
Calcium Pantothenate	0.2 mg.	0.8 mg.
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Lilly
SINCE 1



LILLY SINCE 1876

Westward

Kansas City by 1881 had become a bustling market center for Western commerce.
It was chosen, therefore, as the logical place for Colonel Eli Lilly's brother, James,
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When this step was taken, it was the beginning of a long march
which was to carry the Lilly name as a symbol of quality medicinals to all points of the compass.
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made possible by our American system of free enterprise.

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The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

Harold M. Camp, EDITOR. Theodore R. Van Dellen, ASSOCIATE EDITOR.

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Vol. 99, No. 5 May, 1951

THE NUMBER ONE CITIZEN OF ROCHELLE

In the March issue of *The Illinois Medical Journal* there was a story relative to the Number One Citizen of Danville, Dr. Harlan English. It was only recently called to our attention that another Illinois physician had been similarly honored by his home town last December.

Rochelle selects its Number One Citizen each year and the honor for 1950 was given to Dr. Arthur R. Bogue of that city. The annual "Man of the Year" banquet was held in the Rochelle Township High School, Tuesday evening, December 19, and the principal speaker was Hon. Everett M. Dirksen, United States Senator from Illinois. The subject of the address was "Freedom Is Not Free." Senator Dirksen praised Dr. Bogue, and commented on the many things he has done for Rochelle. An achievement award of a plaque was presented to Dr. Bogue following the address. Dr. Bogue has been in practice for thirty years and has been president of the school board for twelve years. He has been very active in the affairs of his county and the State Medical Society, Fellow of the AMA, and active in other organizations.

He has long been interested in all community affairs, among these the Chamber of Commerce, American Legion, and also prominent in the local Rotary Club. Once more we desire to commend a community for selecting a member of the medical profession as its outstanding man of the year. Likewise we again urge physicians everywhere to become interested in all community activities and do their part in making it a better place for people to live, work and establish their homes.

THE V. A. HOME-TOWN MEDICAL PROGRAM

A release was recently received from the Acting Chief Medical Director, Department of Medicine and Surgery, Veteran's Administration, relative to a few inconsistencies on the part of participating physicians. Although this directive was sent to all V. A. Regional Offices and Centers, an accompanying letter stated that there were very few abuses noted on the part of Illinois physicians.

These were primarily relative to the issuance of prescriptions for Veterans Administration beneficiaries, and the following prescribing inconsistencies were involved:

(1) Excessive quantities of medication prescribed

(2) Proportionately large number of injectable products were prescribed.

(3) Medication not indicated for the service-connected or adjunct condition.

It is called to our attention that outpatient treatment is restricted by law and regulation to

the treatment of service-connected, adjunct or contributing medical conditions. It is necessary therefore, that all drug items for V. A. patients be prescribed as judiciously as for private patients. In no instance should quantities be in excess of that required for treatment between visits to the physicians' offices to have the medication administered.

It is stated that the above noted violations of law and regulation, and the apparent disregard for sound medical ethics, jeopardize the entire out-patient medical care program through fee basis physicians, and efforts should be made to insure that the program operates on a sound legal and medical basis.

It was further stated that when prescribing inconsistencies are noted by Chief Medical Officers, the State Medical Societies or their intermediaries will be notified by letter and requested to contact the offending physician and advise him in writing that future actions of this type will result in his removal from the list of physicians eligible to treat veterans on a fee basis.

We are sure that violations have been few in number in Illinois, and it is hoped that every participating physician in this state will endeavor at all times to comply with the existing regulations, such as were given in complete detail when the plan was submitted, and approved some years ago by the State Medical Society and the Veterans Administration.

In submitting this release, our friendly Regional Medical Director desired to thank the physicians of Illinois who have been working under the plan so satisfactorily in recent years. It was deemed advisable, however, to bring this information to the attention of the Illinois participating physicians so that they would pay strict attention to the law and regulations under which the plan was established. It seems unlikely that further violations will be noted in this state.

UNITED WE STAND—DIVIDED WE FALL

Some of the animosity toward the medical profession comes from careless statements which are inadvertently made by the physician. This came to our attention recently when we heard an influential citizen tell a group of equally influential men of his gripes against the medical profession. His wife had consulted a reputable surgeon and was told that an operation was needed. Not being content with one opinion they consulted another man of equal renown but of a more temperamental nature. He was indignant and later told the influential citizen in a confidential manner that, " an operation would have killed your wife." This struck like a bombshell and so far as the layman was concerned physicians were nothing but a "bunch of murderers."

The circumstances in this case happen to be known. The patient may not have needed the operation inasmuch as it was recommended as a diagnostic procedure. On the other hand, she was not a poor risk and the procedure surely would not have killed her. It is hard to believe that the second surgeon meant what he said. In all probability he thought that the derogatory remark might raise himself a notch or two above his opponent. But the statement backfired because it lowered the husband's estimation of all physicians including the second surgeon. We also know that this man has told the story over and over again and by this time many others may share his opinion.

It has been stated repeatedly that inadvertent remarks made by another physician also is a major factor in the filing of malpractice suits. Criticizing a competitor is a sign of weakness. Every knock against a fellow physician leaves a dent in the framework of the medical profession. Let us be careful lest organized medicine be made to look so "crummy" that our patients will begin to demand a "new model."

EMERGENCY MEDICAL CALLS

One of the responsibilities of the county medical society today is providing emergency service to the residents of any community. The inability of any individual to secure a physician in emergency cases, has been the basis for one of the most serious accusations against the profession as a whole.

Night calls, emergency calls, have been thoroughly discussed in medical journals, county society bulletins, and in THE LAY PRESS. The Council on Medical Service of the American Medical Association conducted a survey during the summer of 1948 and found that only about 60 county medical societies had developed any formal plan for handling emergency and night

calls. The increasing pressure on this phase of medicine has resulted in bringing this total to 100 or 120.

The problem varies according to the population of any community. Plans adaptable in a city of 100,000 would not be necessary in a town of 5,000. However, the plan which would be successful in a city of 100,000, might not be the answer in a metropolitan area.

Illinois presents a complicated picture of metropolitan problems and rural situations to make it necessary that the plan adopted fit the community which it serves. For this reason, the solution rests upon the county medical society.

The Council on Medical Service of the American Medical Association has developed a pamphlet which outlines 16 plans representing a cross-section of the various approaches being used throughout the country by medical societies.

James R. McVay, M.D., Chairman of the Council, writes: "Every county or city has real emergency cases, and one of the weak spots in many medical care programs is the inability to put physicians in immediate contact with such cases. The first requisite to successful handling of emergencies is an understanding and cooperative medical profession. Some physician has to make the emergency night call; every physician should do his part so that the burden does not fall on the FEW. The second requisite is a well defined plan for handling such calls — a plan which is understood and accepted by the public and the physicians. It is hoped that this pamphlet will be of assistance to many societies in devising a workable plan."

Write to the Council on Medical Service
American Medical Association
535 North Dearborn Street
Chicago 10, Illinois

and request that they send you: "Planning for Emergency Medical Calls" — A Resume of the plans of 16 county medical societies.

If your society has not been active in this phase of medical care planning, now is the time for you to add this to your list of important services to be provided for the residents of your community.

IT'S GOOD PUBLIC RELATIONS.

History repeats itself. An archeologist reported that Europe touched America millions of years ago.
—Oregon Purchasing News

SYMPATHECTOMY FOR PERIPHERAL SCLEROSIS

The painful and disabling effects of arteriosclerosis of the lower extremities are difficult to control. This is understandable because intermittent claudication, rest pain and pregangrenous lesions are signs of advanced impairment in circulation. But no one can blame the medical profession for not trying; pharmacies are filled with remedies and physical therapy units littered with gadgets and other devices to improve blood flow. During the past 15 years the surgeons have advocated lumbar sympathectomy and the time is ripe now to evaluate the results.

Sympathectomy was not considered a logical procedure in the arteriosclerotic patient because the vessels had lost their elasticity and were not capable of dilating. But there is adequate proof now that the lack of vasospasm as demonstrated by spinal anesthesia, the Landis Test or paravertebral block is not a contraindication to surgery. Whereas a good temperature response to these procedures predicts a satisfactory outcome to operation it does not follow that a negative test means failure. On the contrary, many of the good results occur in those with no evidence of vasospasm.

The operation is tolerated well even though the majority of patients are elderly. Extreme hypertension, diabetes and coronary arteriosclerosis are additional hazards. Amputation rather than sympathectomy is in order when there is definite gangrene or necrosis down to the bone proximal to the toes.

Edwards and Crane[1] reported recently on the outcome in 100 patients who underwent bilateral or unilateral lumbar sympathectomy. The age varied from 30 to 80 and 79 were male and 21 female patients. Diabetes was present in 27 patients. Seventy per cent had threatened or actual necrosis and the remainder complained of intermittent claudication. One was made worse by the operation and there were two hospital deaths. Ninety-two left the hospital improved. A survey 20 months later revealed that 89 patients were alive and the sympathectomized foot was almost invariably better than its unoperated fellow.

Stuart N. Rowe[2] of Pittsburgh summarized recently the pertinent literature on the results of autonomic surgery in peripheral vascular

disease in general. In arteriosclerosis the following tabulation was reported:

	Improved	*Unimproved*
Coller	69%	31%
De Takats	92%	8%
Average	81%	19%

These results compare favorably with those in Raynaud's disease for which the operation is made theoretically to order. The following are reported for this condition:

	Good	*Improved*	*Unimproved*
White and Smithwick	74%	20%	6%
Gask and Ross	53%	27%	19%
Rowe	60%	20%	20%
Average	62%	23%	15%

Sympathectomy is also recommended in Buerger's disease and the following results have been obtained:

	Able to Work	*Comfortable*	*Unimproved*
Telford and Stopford	40%	25%	35%
White and Smithwick	42%	53%	5%
Rowe	34%	50%	16%
Average	38%	43%	19%

1. Edwards, Edward A. and Crane, Chilton: Lumbar Sympathectomy for Arteriosclerosis of the Lower Extremities, The New England Journal of Medicine **244**: 199, 1951.
2. Rowe, Stuart N.: Autonomic Surgery in Peripheral Vascular Disease, The Pennsylvania Medical Journal, **54**: 127, 1951.

AN UNUSUAL INTERPROFESSIONAL DINNER CONFERENCE

On Thursday evening, March 29, the Morgan County Medical Society had a meeting of unusual interest, with a large attendance. Members of the medical, dental, pharmaceutical and legal professions were present at this dinner meeting held at the Dunlap Hotel, Jacksonville.

The principal speaker was Mr. George E. Hall from the American Medical Association, Bureau of Legal Medicine and Legislation, who discussed many of the problems in Forensic and Legal Medicine. Mr. Hall told of the legal problems involved in artificial insemination, and referred to some court decisions pertaining to the subject.

Eugenic sterilization was likewise discussed, this being legal in some states especially in regard to the feeble-minded. Sterilization as a matter of convenience was likewise given much consideration in the discourse. The legal aspects of blood tests to determine paternity was another of the subjects presented, as was also the chemical tests for alcoholism. Thirteen states now admit this evidence in court, although it has not as yet been approved in Illinois.

Some interesting problems in connection with the work of coroners were given much consideration. With approximately 3050 counties in the United States, there are only about 50 which have full time coroners. Some of these are members of the medical profession, but many counties, including some of the metropolitan areas, do not have a physician as coroner. There are many interesting problems of an inquestual, as well as judicial nature involved in the work of coroners.

Although in some states a medical examiner system is used, there are no stated qualifications for the office of coroner in Illinois. The legal aspects of autopsies were likewise considered in much detail. The necessity of getting someone capable of making all examinations and tests to aid in determining the cause of death, and in many instances, who actually caused the death, is most desirable.

Methods of improving the coroner system in Illinois were mentioned in the discussion by Mr. Hall. Following this fine address, a question and answer period followed, and many interesting questions were asked, and efforts made by the speaker to give the proper answers.

This type of meeting is worthy of consideration on the part of county societies everywhere, and it was quite obvious that members of the several professions which were present have many mutual problems in their respective fields of endeavor. In the absence of the president of the Morgan County Medical Society, C. Ellsworth Black presided, and George Drennan, as program chairman, introduced the speaker of the evening.

Three officers of the Illinois State Medical Society were among the many guests at the dinner meeting, all of whom were introduced by the chairman. The Morgan County Society should be complimented for arranging this type of meeting to get members of the several professions together, and we sincerely hope that it will be done in many parts of the state during the present year.

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chairman, John R. Wolff, Co-Chairman, Edwin F. Hirsch, Carroll Birch, Hubert L. Allen, Frederick W. Slobe, Edward W. Cannady, Ford K. Hick, W. Robert Maloney, Roland R. Cross, Alfred P. Bay, Frederic T. Jung.



Revised Mental Health Act

Many physicians throughout the state are not familiar with the changes made by the Revised Mental Health Act that has been in effect since October 1, 1945. This law made specific changes with regard to the requirements for admission of mentally ill patients to institutions.

The Act provides that no person shall be deprived of his liberty on the ground that he is, or is supposed to be, mentally ill or in need of mental treatment, except in accordance with the provisions of this Act.

The Act sets forth three procedures by which a patient in need of mental treatment can be admitted to and confined in a hospital. These are: (1) by voluntary application; (2) by court commitment; and (3) by emergency admission.

There has been little or no involvement of physicians in regard to the first two methods of admission — by voluntary application or by court commitment. Pending malpractice claims, however, indicate that the involvement comes in connection with emergency admissions.

The Mental Health Act specifically defines the duties of the examining doctor and the law requires that the doctor must:

(1) *Personally* make a *complete* mental and physical examination of the patient.

(2) Determine that the patient's mental condition requires an emergency confinement necessary to prevent *physical violence* to himself or others.

(3) Make examination *on the same day* he signs the certificate, which must be in duplicate.

(4) Not be an employee or financially interested, directly or indirectly, in any privately owned institution in which detention is sought.

The Department of Public Welfare has provided formal certificates for the convenience of the profession and it is *advisable* that they be used. Some physicians are still routinely using prescription blanks, and so forth, to certify to the mental condition of a patient and are obviously unaware of the requirements of the law.

The certificate of the examining physician is not sufficient for emergency admission and the law specifically requires that a formal petition for commitment be filed with the Clerk of the local County Court and that the verified petition, plus the physician's certificate, be presented before any person can be admitted, or detained, in a hospital for the mentally ill. The law further requires that the petition and physician's

(*Continued on page* 256)

CORRESPONDENCE



HOW "AUTOMATIC EXTENSION" OF SERIES "E" U.S. BONDS AFFECTS YOU

Do you own some "E" U.S. Bonds. Did you invest in them about 10 years ago? (The First "E" Bonds were offered by the U.S. Treasury May 1, 1941.) If so, such Bonds are approaching their maturity. So, you'll be particularly interested in new legislation passed by the U.S. Congress and signed by the President involving these Bonds.

Arnold J. Rauen, State Director, U.S. Treasury Defense Bond Division for Illinois has outlined a brief explanation of how this new "automatic extension" affects you and your "E" Bonds. This is it:

(1) When your "E" Bonds reach their maturity, or 10th year, YOU CAN CASH THEM IN if you need the money. *Please remember that!*

(2) You'll want to continue your investment in these Bonds. (This is recommended by many authorities). Then, you need do nothing about the Bonds. Just keep them as you always have, in a safe place. And, the new legislation provides you can hold the Bonds for another 10 years. And interest will add up at the rate of 2½% each year you hold them for the first 7½ years. Then, the interest rate increases for the rest of the 10 years until it reaches about 2.9%. Also, *please remember*: you can cash in these "extended" Bonds any time you care to, just as you can now. And you'll receive the accrued interest. You don't have to pay income tax on the interest you get on this until you cash your Bonds.

(3) Maybe you'd like to get a check from the U.S. Government twice yearly. Well, the new legislation allows you to turn in your "E" Bonds when they reach maturity (10 years) for "G" Bonds of $500 and higher denominations. These "G" Bonds pay 2½% interest annually until their maturity in *12* years (the "E" Bonds mature in *10* years, remember) and you get your check for that twice yearly.

And, you can cash your "G" Bonds in, if you need to, any time after 6 months from the date you invest in them. And, they'll be redeemed at full face value, too.

Those are the new provisions, briefly. You can get full details from your local Bank or write Mr. Rauen, 105 W. Adams St., Chicago 3.

CONFERENCE ON AGING

The University of Michigan announces its Fourth Annual Conference on Aging to be held in Ann Arbor, July 11-13. Rehabilitation of the older handicapped person will be the topic of this year's conference, with special emphasis upon the theme that "All Are Needed." American and foreign authorities will be available to discuss the questions raised by the working conference. Attention will be directed to medical, psycho-social, economic and vocational aspects

of retaining the over-40 workers in the labor force and the role of these workers with reference to mobilization. Exhibits on the preventive and restorative phases of rehabilitation are planned. The conference is under the co-sponsorship of the Institute for Human Adjustment, School of Medicine, School of Public Health and Extension Service of the University of Michigan, the Office of Vocational Rehabilitation of the Federal Security Agency, and the Michigan Department of Vocational Rehabilitation.

Room reservations should be made by writing directly to the Michigan Union, Ann Arbor. For further information regarding the conference write to Dr. Wilma Donahue, Institute for Human Adjustment, Room 1510, Rackham Building, Ann Arbor, Michigan.

"YOUR MENTAL HOSPITALS" CHICAGO COMMUNITY CLINIC

The program of the Chicago Community Clinic illustrates the value of out-patient services. This clinic, located at 2436 West Warren Boulevard, Chicago. Illinois, is a psychiatric out-patient facility maintained by the Illinois Department of Public Welfare for patients conditionally discharged from the four northern State hospitals; that is, Chicago, Elgin, Kankakee, and Manteno State Hospitals. Most patients are kept on conditional discharge for a varying period up to two years, and during this time pay periodic visits to the Clinic. Here the services of the doctors, social workers, and psychologists are available in order to further their rehabilitation.

During the past statistical year, an average of 500 patients per month were seen at the Clinic, and 12,712 therapeutic interviews were given. In addition to the above program, so-called "community patients" receive treatment. This group consists of people who have never been in State hospitals, but are in need of mental care and are psychiatrically indigent. These patients are referred from the various recognized social agencies, physicians, relatives and other interested individuals.

The criteria for acceptance of "community patients" were: 1. that the patient was able and willing to come, 2. that he could benefit from what the clinic had to offer, 3. that the problem could best be met by psychiatric help, 4. that he was psychiatrically indigent, and 5. that he was referred by a physician, a recognized agency or court. If the problem could be met by the services of other agencies, and did not necessarily require psychiatric care, the individual was referred to the agency best suited to fulfill the individual's needs.

During the past year, a large number of such patients with varying degrees of emotional disturbances or mental illness were seen at the Clinic. Those with emotional illness received help to prevent serious disabling developments or psychotic episodes. The mentally ill were helped on an out-patient basis, thus avoiding the necessity of entering a mental hospital.

Thus we see that the above two combined programs have been of great assistance in attempting to alleviate the overcrowding in our State hospitals, keeping patients out of State institutions, as well as a weapon in the prevention of mental illness.

G. A. Wiltrakis, M.D.
Deputy Director

NORTHWESTERN'S CENTENNIAL BRINGS CONFERENCE ON AGING

Northwestern University Medical School will present a conference on the Problems of the Aging Population as their part in the University Centennial Celebration. The meeting is open to all and will be held at Thorne Hall, June 7-8.

PROBLEMS OF AN AGING POPULATION
Co-Chairmen:
Charles W. Freeman, Dean, Dental School
Richard H. Young, Dean, Medical School

Thursday, June 7th

MORNING

9:30 Aging in the United States
Kimball Young, Chairman, Northwestern

Topics and Speakers:
Demography — Philip Hauser, Chicago
Attitudes — Clyde Hart, Director, National Opinion Research Center
Ecology — Rupert Vance, North Carolina

LUNCHEON

12.30 Educational Problems of an Aging Population
Paul Essert, Director, Institute of Adult Education, Columbia

AFTERNOON

2:00 Research Problems

(Session limited attendance) Send ticket requests to Medical School.

Social — Economic Aspects — Philip Hauser, Rupert Vance, Edwin Witte

Social — Psychological Aspects — R. F. Winch, Clyde Hart, Fred Hoehler

Family Aspects — Miss Bonde, Miss Elliott, Miss Kirk

Social Attitudes — Anthropology Department

Educational Features — Paul Essert, School of Education

EVENING

8:00 Social Implications of an Aging Population

Payson Wild, Chairman, Northwestern. Speakers: Philip Hauser, Walter Reuther, Fred Hoehler.

Friday, June 8th

MORNING

9:30 Aspects of Aging

Dr. Richard Young, Presiding Officer, Dean, Medical School

Topics and Speakers:

Biological Phenomena of Aging — A. J. Carlson, Chicago

Nutritional Aspects of an Aging Population — Tom Spies, Northwestern

Medical Aspects of an Aging Population — Leonard Scheele, Surgeon General, U. S. Public Health Service

Psychiatric Aspects of an Aging Population — C. H. Hardin Branch, Professor of Psychiatry, University of Utah

Dental Aspects of an Aging Population — George Teuscher, Northwestern

AFTERNOON

2:00 Our Aging Labor Force

Carroll Daugherty, Chairman, Northwestern

Topics and Speakers:

Management's Attitude and Responsibility — Clarence Randall, President, Inland Steel Company

Organized Labor's Attitude and Responsibility — Walter Reuther

Government's Attitude and Responsibility — Edwin Witte, University of Wisconsin

EVENING

8:00 Anticipating Aging with Assurance

Joseph Hinsey, Moderator, Dean, Cornell University Medical School

Speakers:

Dr. Leonard Scheele — Surgeon General of the U.S. Public Health Service

Dr. C. H. Hardin Branch — Professor of Psychiatry, University of Utah

Mr. Reinhard A. Hohaus — Actuary — Metropolitan Life Insurance Company

On Saturday night, June 9th, the Medical School will hold its annual alumni faculty dinner at the Furniture Club of America, 666 Lake Shore Drive, Chicago. The price of the dinner is $6.50 per plate.

Representatives of the five-year Medical classes of 1906, 11, 16, 21, 26, 31, 36, 41, and 46 are urged to plan reunions and reserve special class tables at the dinner. Members of the 55-year class of 1896, the 50-year class of 1901, and the graduating class of 1951 will be guests of the Medical Alumni Association. Reservations and additional information may be secured from the Medical Alumni Office, Room 796, Ward Building, 303 East Chicago Avenue, Chicago 11, Illinois.

During the A.M.A. convention, a Northwestern alumni luncheon will be held on Tuesday, June 12, at 12:30 in the Hotel Claridge, Atlantic City. Dr. Arthur H. Colwell, Chairman of the Department of Medicine at Northwestern University, will speak on "Current Developments at the Alma Mater".

PHYSICIANS' ART SHOW AT ATLANTIC CITY

The American Physicians Art Association will have an art exhibit, as usual, during the A.M.A. convention at Atlantic City, N. J. June 11 to 15, 1951, inclusive. Any physician in the United States, Canada and Hawaii desiring to participate in this show should communicate with the secretary for particulars.

J. Henry Helser & Co., Inc., Investment Managers with offices on the Pacific Coast, are the new sponsors of the American Physicians Art Association and will award 200 trophies besides a special Helser Trophy — a large decorative cup depicting Yankee Ingenuity. This cup is to be awarded for art work done in any medium. Also the large Popularity Trophy will be awarded to the owner of the art piece receiving the most popular votes during the A.M.A. convention. Over 4000 members of the American Physicians Art Association will receive shortly, entry blanks, shipping labels and rules about this fourteenth art exhibition.

(*Continued on page 242*)

ORIGINAL ARTICLES



Obesity — Diagnosis and Treatment

James H. Hutton, M.D.
Chicago

Obesity is one of the major problems facing us today. It has an important public health as well as a cosmetic aspect. Unfortunately, most obese persons are more interested in their figures than they are in their health. We are told that the incidence of degenerative diseases would diminish if we could prevent or correct obesity.[1]

The dangers and disadvantages of obesity may be considered under three headings—Social, Economic and Physical.

Social. The old adage that nobody loves a fat man still contains a grain of truth. Obesity results in a degree of social ostracism, particularly for women. Some men dislike fat women no matter how intelligent or attractive they are otherwise. Consequently obesity reduces a girl's chances of establishing her own home.

Economic. Many jobs are not open to obese applicants. Clothing is more expensive. Life insurance rates are higher.

Physical. An increased incidence of hypertension, diabetes, heart disease, cancer, atherosclerosis, nephritis, toxemias of pregnancy, cirrhosis of the liver, emphysema and varicose veins is said to have been found among the obese.[1]

The death rate is one-third higher among those whose body weight is 20% above the average.[2] The death rate from coronary artery disease is 50% greater among the overweight.[2] Among those with 25% excess body weight the death rate from diabetes is eight times higher than among persons of normal weight.[2]

For every inch the waist measurement exceeds the chest measurement the person may subtract two years from his life expectancy.[3]

We do not know whether obesity is a causative factor in these diseases or whether the factor that leads to obesity also causes the diseases. At any rate, obesity often accompanies those diseases and is definitely not a sign of good health.

Etiology. What causes a person to become fat? Of course every obese person eats, or at some times has eaten, more food than was required by his expenditure of energy. But that is no explanation. Practically all obese persons were at some time thin or of normal weight. What happened to cause them to acquire the excess weight? Obviously in most cases some factor was added to or subtracted from their metabolic machinery.

Presented at Postgraduate Meeting, Jacksonville, Ill., March 30, 1950.

Most adults maintain approximately the same weight over periods of many years. At the same time they make no conscious effort to have their caloric intake equal their energy output. But the obese person has difficulty to keep from gaining weight constantly. This statement needs some qualification. Rony[4] points out that while, during the dynamic phase of their obesity, fat persons may consume large quantities of food, once the static phase is reached the fat person may eat small quantities of food. Why? What starts the process and why doesn't the gain in weight continue throughout life? Every one who deals with this question is familiar with the fact that it may be very difficult to obtain say a 20 pounds loss from 200 to 180. The latter figure is maintained with difficulty. Upon the slightest surrender to the demands of the appetite the weight rapidly goes back to the original 200 pounds and stops there without any further conscious effort on the patient's part.

If obese persons have inordinate appetites which lead to obesity, what caused the increased appetite? The patient did not always have it.

Does the fat person eat more than the thin one indulging in approximately the same activities? Does the obese person handle food as efficiently as the thin one? The answer usually is that he does and there is no generally acceptable evidence that he does not. But in the animal world there is some reason for doubt.

Rynearson[1] says that hypogonadism in castrated animals has been observed to cause obesity consistently. Krider[5] says that castration in hogs results in decreased activity and increased fattening and in more rapid and more economical gain.

When horses furnished the motive power on the farm, there were one or two horses on nearly every farm that were what we called "easy keepers." Such horses did the same work as the thin ones kept in adjoining stalls and yet were always fat or, as we said, "in good flesh." They were given less feed than the thin horses. Their intake was controlled as they got only what food was given them. Park[6] says that in nearly every bunch of beef cattle there will be one or two "poor doers." That is, they remain thin in spite of getting the same amount of food as the rest of the herd, and yet are apparently in good health. In the average beef breeding herd there will be a few cows that stay in extra flesh even though the cows are being fed only enough to keep them in breeding condition and the average cow may be in just fair flesh. One of the principles upon which livestaock breeding is based is that some animals make more efficient use of their feed, and, by selection, the general efficiency of the herd in this respect can be increased.

Long and his co-workers[7] showed that rats which ate their entire daily ration in a two-hour period gained more weight on the same amount of food than did rats which ate throughout the day.

Mr. George S. Halas,[8] of the Chicago Bears, in discussing body weight and eating habits of football players, says it is difficult to conclude that an individual will gain weight if he continues to eat as heavily after the playing season as he did during that time.

The latest addition to our ideas of etiology is that obesity is on an emotional basis. The obese person gets that way because eating furnishes a consolation for the frustrations that bedevil him. That seemed to be partially true in some cases in my own practice. However, there seem to be as many thin nervous people as there are fat nervous ones. Ever since Shakespeare's time fat people have been regarded as placid. Furthermore in times of stress thin persons tend to lose weight while fat ones gain. It seems much more likely that the strain, frustration or what-not merely aggravates a tendency already present.

The Endocrines. Some are allergic to the idea that the endocrine system has anything to do with the accumulation of obesity. Enthusiastic endocrinologists are prone to give the endocrines most of the credit—or the blame—for the disorder. Probably the truth will be found eventually between these two extreme views.

According to Conn,[9] while the endocrine influence in the etiology of obesity may be slight, it is important in determining the pattern of the obesity. He suggests that by carefully noting the distribution of his patients' obesity the physician may be led to the diagnosis also of some endocrinopathy. But if the endocrines have little if any part in causing obesity how do they exert such an important influence on its distribution?

In Cushing's syndrome the obesity is deposited about the face, neck and trunk. The skin is

marked by striae about the lower abdomen, iliac crests, lower back, the breasts, the axillae and the inner aspects of the upper arms and thighs. These are said to be due to stretching of the skin. However, two persons of the same height and build may put on approximately the same amount of weight in the same period of time, yet one may have numerous striae, the other none.

Recently[10] the injection of cortisone is reported to have been followed by the appearance of such striae long before the patient had gained enough weight to account for them. Because of this and certain other data we have to consider that obesity may sometimes accompany or be due to some glands.

For some years I've noticed that it is very difficult for patients with these striae to lose weight. After Cushing[11,18] and others[12] reported some relief in Cushing's syndrome by irradiation of the pituitary, we have used small doses of radiation (50-100 r) applied to the pituitary and adrenal regions of patients showing signs of basophilism. Results have sometimes been very good. Patients rapidly lost several pounds and reported an improved sense of well being. Such cases are not common.

Recently Wilkins,[13] quoting Albright, pointed out that excess of the glycogenetic cortins which tend to cause the utilization of amino acids for glycogen formation and to inhibit protein anabolism may account for the diabetic sugar curve, obesity, evidence of protein deprivation and other signs of metabolic disturbnce encountered in Cushing's syndrome.

Long ago Bomskov and Schneider[14] reported that some rats survive bilateral adrenalectomy and become giants (wheight 350 gm.—normal 200-250 gm). In all of these, accessory adrenal cortical tissue was found exceeding in mass the removed organs. They concluded that the obesity was due to hyperfunction of the adrenal cortex.

In the past it has been thought that whatever part the endocrines played in the accumulation of obesity was on a hypofunctional basis. So we spoke of pituitary (hypo) obesity and hypothyroid and hypogonad types. The obesity resulting from hypothalamic-pituitary damage supports that idea. Myxedema is usually accompanied by considerable gain in weight and hyperthyroidism is characterized by weight loss. But acromegaly is accompanied if not by obesity at least by gain in weight, and Simmond's disease is marked by weight loss. Of course neither of these involve the posterior lobe, which was the one blamed for the obesity.

The pituitary has been blamed more often than any other gland and there is considerable evidence both for and against the idea that it is in some way responsible. Perhaps the most convincing evidence that the pituitary-hypothalamus-midbrain center is involved in some manner is the fact that obesity regularly follows properly placed lesions in the hypothalamus. Heinbecker and his co-workers[15] point out that the maximum degree of obesity occurs after hypothalamic lesions which are also followed by degeneration and loss of the basophilic cells of the hypophysis. They express the opinion that lesions of the hypothalamus, or of the pituitary, or of both, may lead to obesity.

And so the question as to what role, if any, is played by the endocrines is still not understood.

Whether heredity plays any part in obesity is still an unsettled question, there being some evidence both for and against the idea that in some cases obesity is an inherited characteristic. In a series of more than 800 patients seen in my own practice 46 patients presented some evidence that heredity played a part in their obesity.

There are some significant points in the history of many obese persons. The majority of children of the Froehlich type—with apologies for the use of that term—dated the onset of their obesity to some infection such as mumps, measles, chicken pox, or to an operation such as removal of tonsils and adenoids or an appendectomy. Women most often dated their obesity from pregnancy or an operation. Furthermore most of these women belonged to the pituitary type—that is, they were of average height or less and the obesity was of the girdle type. Most of them weighed less than six pounds at birth. They were thin until the onset of obesity. Many times their weight at marriage was about 100 pounds. They might have been able to nurse their first baby but not the following ones.

Infection, trauma and pregnancy often result in pituitary damage. At any rate, many obese

women in my series also had some degree of hypopituitarism.

TREATMENT

For those who believe that obese persons owe their trouble to laziness and lack of will power treatment is a very simple matter. All that is needed is to give the patient a diet of 600 to 800 calories and a lecture on the beauties of living on this semi-starvation diet. After that the patient is on his own. But in private practice treatment, if it is to be successful, is much more complicated.

(A) *For Children.* The diet needs to be much less restricted than in the case of adults. Unless they are greatly overweight or tall for their age, they do not need to lose much weight. If they cease gaining, their increase in height will soon result in normal weight for height. I usually ask them to refrain from pie, cake, ice cream, candy and soft drinks. Their intake of bread, butter, potatoes and gravies should be mildly restricted.

All of them should have thyroid to tolerance. This is best determined by giving them gradually increasing doses until that dose is reached which causes tremor, tachycardia, nervousness or insomnia. The dose should then be decreased by about 25% and continued for some months.

It is seldom necessary to give them appetite-depressing drugs or hypodermic medication until after the age of 10.

For boys with hypogonadism it is necessary, after the age of 10 or 12, to give some chronic gonadotropin such as APL, Antuitrin-S or one of that family in doses of 150 to 250 units twice weekly. With this one should also give posterior lobe extracts in doses just short of that amount which causes faintness, nausea or annoying intestinal cramps. Most of them will tolerate five minims or more of the obstetrical preparation. If the genitalia do not respond promptly, testosterone proprionate may be given alternate months in doses of 10 mg. twice weekly.

The urine should be examined for sugar at least every 90 days. In an occasional case glycosuria follows the administration of the gonadotropins.

As normal weight and development is approached, the frequency of treatments should be gradually reduced. The child should be seen every month or so, however, so that the slightest tendency to put on excess weight again may be promptly checked.

(B) *Adults.* This may be discussed under the following heads:

Diet
Appetite-depressing drugs
Diuretics
Endocrine preparations
Emotional readjustment

We are but little better off now in the treatment of adults than we were in the treatment of diabetes before insulin came to our assistance. One should take a careful history and try to find out the sequence of events that preceded and accompanied the gain in weight and so gain some idea of the etiology in each case. A careful physical examination is required. Such laboratory work as is indicated should be done. This should include at least a complete blood count, an analysis of a 24-hr. collection of urine, and basal metabolic rate. Where feasible a glucose tolerance or insulin tolerance test or both should be done. Determinations of the blood non-protein nitrogen, uric acid and serum calcium are often helpful.

Diet. Whether the obese person eats more or less than his thin friend is a matter of academic interest when it comes to treatment. If he expects to lose weight he will have to eat less than he is presently consuming. If the obesity is due to emotional conflicts, as may be true in an occasional case, the physician should help the patient to resolve these and thus get rid of the urge to eat. Even so the patient will have to acquire new eating habits. He will have to learn to limit his intake to his needs.

Most of us with good appetites eat much more than we need, but some safety device within our bodies enables us to dispose of the excess with little if any gain in weight. The best example of this was what happened before and during the war. Before the war when we were seated in a restaurant the waiter first placed before us a basket of rolls and a platter of butter. We nibbled on these, eating one or more rolls and butter before the meal was served. Of this we ate as if nothing had preceded it. Came the war and the rolls and butter disappeared, and sugar was restricted. We otherwise ate as before and lost no weight.

Rony[16] quotes Wilder to the effect that there must be some device other than appetite to regulate weight, and that it is easier to understand why some people get fat than it is to understand why most of us do not.

Psychotherapy plays some part in dieting in all cases. One must impress the patient with the fact that the physician can do no more than assist him to lose weight. Most of the responsibility rests on the patient. One must also secure the cooperation of the family. The mother or the grandmother may feel that the patient is being starved—and in our present state of ignorance she is partly right—and that more food must be consumed than is allowed in the diet. Unless this idea can be eradicated or the patient taught to ignore it any reducing regime is likely to fail.

The diet must be adequate as regards protein, vitamins and minerals. My own plan is to provide about one gram of protein per kilogram of body weight. This is one place where the physician may be forgiven for using vitamin preparations rather freely. The diet should be as bulky as can managed and as generous as can be allowed so that the patient will lose weight slowly—one or two pounds per week.

In earlier years we gave adults a diet consisting of C. 80, P. 80, F. 40, producing 1000 calories. It was difficult for patients to stick to this meager diet. So of late years we use a 1400 calorie diet (C. 135, P. 80, F. 60). This is sufficiently liberal that patients find it no great hardship and most of them will follow it reasonably well.

Some attention must be paid to fluid balance. The obese body seems to hold water like a sponge. Its retention in undue amounts seems responsible for the plateau on which obese persons sometimes find themselves. One can reduce the fluid intake, limit the amount of sodium chloride or use ammonium chloride and salyrgan-theophylline. The latter procedure gets rid of large quantities of water in a matter of 24 to 48 hours, but the body seems to re-accumulate it rather quickly so that the net gain hardly seems worth the effort. Reducing the fluid intake and cutting down on the sodium chloride seems to work better. Some patients have a low serum calcium. The administration once or twice weekly of 1 cc. of parathyroid extract is helpful in these.

In my experience many patients who eat when they are unhappy are also the victims of some endocrine disorder. There is another curious thing in this connection. While fat people may eat because they are unhappy, thin persons lose their appetite under the same circumstances, so that under emotional strain the fat tend to get fatter and the thin to lose weight.

Some obese persons owe their condition to an uncontrolled appetite or they formed their eating habits earlier in life when they needed large quantities of food. All that is needed in such cases is re-education.

Probably most men who treat obesity give their patients thyroid, not because they expect any great help from it because they have so little to offer the patient. It is a much maligned drug. If it is not of great assistance, it certainly does no harm if the doctor keeps the patient under careful supervision. Frequent repetitions of the B.M.R. are unnecessary. One can usually control the dosage by clinical observation. This is discussed under the treatment of children.

Whether the hypopituitarism had any other relation to the obesity than coincidence I would not attempt to say, but many obsese women in my practice were victims of hypopituitarism.

Rowe and Lawrence[17] said that the obesity associated with pituitary malfunction was "stubbornly resistant" to dietary treatment, and that it was usually impossible to reduce weight and keep the patient well at the same time. Cushing[11] since has made similar observations.

In those cases having pituitary deficiency one should give the patient pituitary extracts. I use a crude anterior lobe extract made by Parke, Davis and Company. It was originally marketed as Antuitrin (not Antuitrin-S). It is now sold only to physicians who apply directly to the home office for it. The usual dose is 0.5 to 1.00 cc. once or twice weekly. Posterior lobe extract is given in doses just short of that amount which causes faintness, nausea or annoying intestinal cramps. The two extracts are given in the same syringe at the same time. If the patient has a high fasting blood sugar or a high sugar curve, his reaction to these extracts is tested by determining the blood sugar before and one hour after an injection. If there is an undue rise the extracts are not used in treatment.

If a woman is experiencing menstrual difficulties and is of premenopausal age she is given low doses of irradiation directed at the pituitary and ovaries if she fails to respond promptly to the other measures already described. In women with hypopituitarism the use of pituitary extracts gives more relief than any other measure. They feel so much better following these injections that many continue the injections even when they make no great effort to adhere to the diet.

Appetite-Depressing Drugs. Benzedrine sulfate is alleged to dull the appetite and make the patient feel better generally so that it is easier for them to stay on the diet. Dexedrine sulfate has about the same effect. The usual dose is 5 or 10 mg. twice daily. Desoxyn and methedrine hydrochloride have similar effects.

Diuretics have already been mentioned.

Prognosis. In children the genitalia can be brought to full normal development. Usually the patients attain normal weight and proportions and go their way without further treatment.

In adults no such happy outcome occurs. If the patient sticks to the diet and treatment he can lose the desired amount of weight. If he will maintain this figure for some time the body seems to adjust itself to this new weight level and the diet may be less restricted without gain in weight.

However, obesity continues to be one of our most important unsolved problems. Obese patients are entitled to all the loving care we can give them.

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Physicians' Art Show at Atlantic City (Continued)

The Annual Art Banquet will be held Tuesday evening, June 12 at the Marlborough-Blenheim Hotel, Atlantic City, N. J.

F. H. Redewill, M.D., Sec'y
America Physicians Art Association
760 Market Street
San Francisco 2, California

Tuberculosis is such an insidious disease that no physican can deny the existence of it without adequate roentgenologic study. All patients, regardless of their complaints, should have the benefit of chest X-ray examinations. This is particularly true in conditions such as diabetes and pregnancy where a higher prevalence incidence of tuberculosis is found. Moreover, the taking of a single roentgenogram may not be enough, and so, with persisting symptoms or a suspicious lesion, the X-ray may need to be repeated. J. Mich. State M. Society, Kenneth J. Feeney, M.D., November, 1949.

Clinical Correlation of the Electrocardiogram

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THE ELECTROCARDIOGRAM IN GENERAL PRACTICE

With the ever broadening scope of implementation in the field of clinical diagnostic medicine, the use and limitation of medical tools must be adequately evaluated. It is a propensity that is human to hope for that accurate diagnostic instrument that will simplify and reveal the causative factors of illness. Objective determinations such as laboratory procedures expressed by graphs, tracings, and mathematical findings, seem to connote to the physician a greater accuracy and diagnostic finality of normal and abnormal human function. To be sure, such objective determination confined within its limited sphere may be exceedingly accurate and one may not question its factual information. The interpretation and correlation of these findings in clinical medicine, nevertheless, is difficult, and may actually be misleading, because of the inherent limitations of these procedures. Moreover, our understanding of the wisdom of the body is often woefully inadequate. The physician's awareness of the limitations of implementation in medicine adds to his clinical judgment.

The electrocardiogram is a good example of the vicissitudes found in an objective diagnostic procedure. It must be continually stressed that the pattern of an electrocardiogram is merely an electrical expression of a limited physiologieal function of the heart. The pattern graphically inscribes the electrophysiological ehange of two fundamental functions of heart muscle: (1) rhythm or the origin of the cardiac impulse, and, (2) its spread of conductivity through the heart muscle. It will not give information regarding the strength, contractility or tone of the myocardium. The electrocardiogram cannot indicate the life expectaney of the patient. The clinical value of the electrocardiogram is therefore in the recognition of various arrhythmias and the clinical interpretation and correlation of the normal and abnormal electrical conduction of heart muscle.

It is unfortunate that the attitude of so many physicians who are using the electrocardiogram as an aid in the daily management of patients, lack the desire to understand at least a few of the fundamentals of the electrocardiogram. All physicians, regardless of their interest in heart disease, should have a basic grasp of the use and limitations of the electrocardiogram, the kind of information this proceedure can give and its relation to the correct management of the patient.

Dr. F. N. Wilson[1] has admirably expressed his opinion in these often quoted words: "We shall not attempt a long discussion of the present wretched state of the electrocardiographic diagnosis, or the misery attributable to it. The errors made in this field are due in large measure to the same human frailities that are responsible for errors in others, medieal and non-medieal. We think also that there are altogether too many physicians who want to, and try to read electrocardiograms, but are unwilling to go back to the fundamental principles upon whieh the interpretation of the electrocardiogram must be based. In our opinion, it is impossible to use diagnostic criteria intelligently unless they are fundamentally sound and the foundations on which they rest are clearly understood by the user. Electrocardiography is one of the most exaet of diagnostic methods. Its potential value is great, but it is not being used to the best advantage. . . ."

The understanding of the electromotive funetion of the myocardium can best be visualized by turning to the study of the electrical state of the cell (See Figure 1). In the resting cell, the moleeules of the membrane are arranged in sueh a manner that the external surfaee of the cell is of positive charge in relation to the inside of the cell. This is a state of electrical balance or

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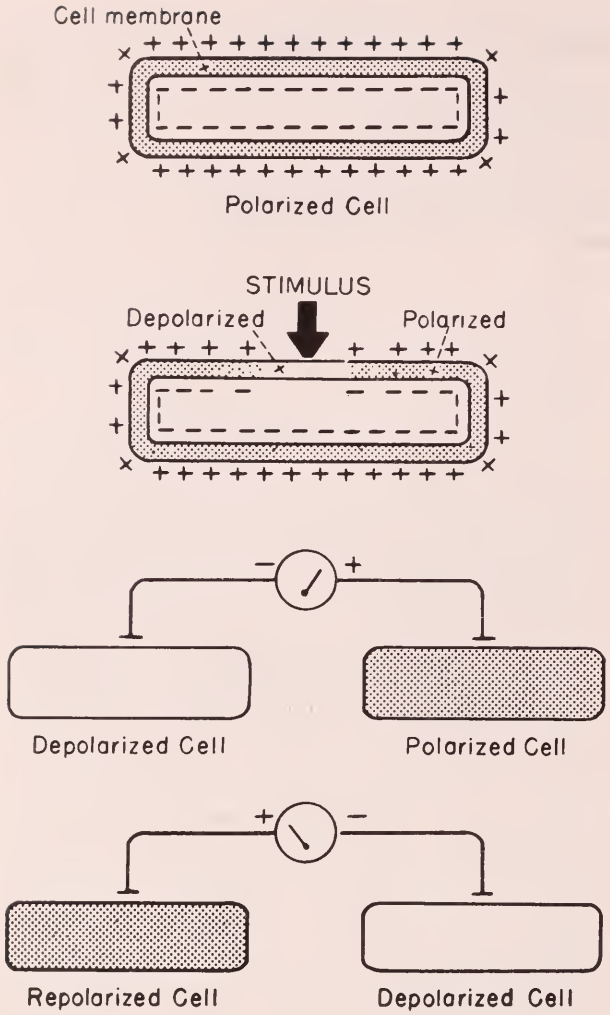


Figure 1.—Top figure is diagramatic representation of a normal resting cell showing the polarized state across the cell membrane, positive outside, negative inside. When a stimulus is applied, the polarized state is lost and no potential exists between the outside and inside of cell membrane. As is shown in the lower two diagrams, a current will flow between a polarized cell and a depolarized cell; a repolarized and a depolarized cell. The positive deflection is always toward the polarized state.

polarization, that is, positive and electrical charges are equal. When an area of the cell membrane is stimulated in some way, mechanical, chemical or electrical, this molecular arrangement is disorganized and the area loses its polarity. Neither side of the cell membrane has any charge. In this state, the surrounding polarized areas in the external cell surface are positive in relation to the stimulated depolarized area where no electrical charge exists and an electrical current is set up. The depolarization wave spreads in all directions from the point of stimulation. This wave has form and direction. Its spread through each cell and from cell to cell in the ventricular myocardium is recorded in the QRS complex. Repolarization is the return of the cell from the depolarized state of no electrical charge to the resting state of electrical balance. The T wave is the recorded ventricular repolarization wave. From the above discussion it should be noted that those areas ahead of the wave of depolarization are positive in relation to the stimulated region. Thus, in the spread of the cardiac impulse there is changing amount of polarized and depolarized tissue, or, changing electrical potentials that are recorded above and below an isoelectric line as the complexes of the electrocardiogram.

Disturbance of the electrical conductivity of the cell, such as delayed repolarization caused by anoxemia or inflammation, is reflected in the pattern of the electrocardiogram. For example, as will be described later, subepicardial injury from pericarditis or subepicardial infarction may change the repolarizing contour of a normal upright T wave to an abnormal inverted T wave.

It should be noted that the abnormal electrical pattern produced by injury to the myocardium is merely an expression of the abnormal electrophysiological charge, and lacks specificity of the causative factors. Subepicardial infarction and pericarditis may produce similar abnormal patterns and therefore the cardiographer must be extremely cautious in his clinical interpretation. A description of the abnormal electrophysiological changes should be stated and not a diagnosis of a disease process. A coronary arterial occlusion does not in itself produce an abnormal electromotive force because the coronary arteries do not cause a detectable electropotential charge. However, the effect of a coronary occlusion with an acute myocardial infarction shows a marked change of pattern because of the disturbed electropotentiality produced by the myocardium. The current of injury showing the abnormal conductivity is not due to the dead myocardial fibers (dead heart muscle is electrically inactive), but rather from the zones surrounding the dead tissue, which are in a state of anoxia, injury and repair.

Modern electrocardiography received impetus in clarity of understanding with the advent of the unipolar leads. The standard leads I, II, and III are generally considered to be inferior to the unipolar limb leads because the former

represent the summation of two influencing potentialities, and therefore represent combined lead patterns. For example, lead I of the standard electrocardiogram represents the combined potentiality of the left arm and right arm, and does not portray the pure potentiality of either arm. On the other hand, the exploring unipolar electrode mainly records the potentiality of a definite local heart area subtending the electrode. Not only does this allow for better localization of pathology but it also provdies for more accurate diagnosis of normal positional variants some of which were sometimes considered as abnormal in the standard leads. Axis deviation in the standard leads has lost its clinical importance unless associated with marked deviation, hypertrophy or strain patterns. Mild left axis deviation as a single finding in the standard limb leads was formerly interpreted by the electrocardiographer as indicative of left ventricular enlargement. Later it became evident that a normal transverse position of the heart from hypersthenic build may also produce this finding. Today, in order to reeducate the physician, who seeks information from the electrocardiographer, the interpretation must be more explanatory. For example, the interpretation of left axis deviation in the standard limb leads and a unipolar pattern of a normal horizontal position of the heart with no other remarkable findings should be described as follows: the heart is in a normal horizontal electrical position accounting for the finding of left axis deviation in the standard leads. Similarly, in the case of the right axis deviation and vertical position of the heart: the heart is in a normal vertical electrical position accounting for the finding of right axis deviation in the standard leads.

Ideally, the electrocardiogram should be interpreted by the physician who is managing the patient. Since this is not ordinarily the case, the electrocardiographer should have at hand at the time of the reading, certain clinical information that should be supplied by the clinician. Most physicians do not realize that this information may aid the electrocardiographer's interpretation. Electrocardiographic laboratories should have available for the practicing physician standard requisition slips with the following information: age, height, weight, body build (asthentic, sthenic, hypersthenic), blood pressure, amount and date of digitalis or quinidine therapy, dates and availability of previous electrocardiograms and the reason the clinician desires an electrocardiogram. The lack of this information may detract from the proper interpretation of the electrocardiogram. Digitalis, for instance, has a profound effect on the electrocardiogram, and may mimic various abnormal patterns, which defy adequate interpretation. It is important therefore, that the time of digitalis administration and discontinuation be known to the cardiographer, keeping in mind that it requires about two weeks to fully excrete this drug. The finding of minor changes of pattern that would ordinarily be classified as probably a normal variation, may prove to be an important clue for further electrocardiographic study. The cardiographer, therefore, must be informed by the referring physician of the suspected clinical diagnosis. The clinician should be aware of the value of serial electrocardiograms in appropriate cases, so that the full diagnostic significance of pattern changes may be made available to him. This is especially true in cases of acute myocardial infarction. Fleeting serial changes returning to a normal curve within a few days are usually not due to a recent myocardial infarction, and are more commonly found in cases of acute pericarditis, pulmonary infarction, and coronary insufficiency. Most cases of acute myocardial infarction show suspicious or characteristic patterns within twenty-four to forty-eight hours. Those cases that do not reveal characteristic patterns within this time almost invariably show minor suspicious findings that become typical within seven to twelve days. In a small percentage of cases interpretation of a myocardial infarction can only be suspected or made by serial pattern changes produced over a period of weeks. In such cases there may be no single pattern curve that in itself is diagnostic and therefore must be inferred from serial changes. The frequency of recording serial electrocardiograms in cases of acute myocardial infarction should depend upon the clinical findings and nature of the pattern change. Considerably more information can be gained in atypical clinical cases with non-specific graphic changes by daily pattern study for 2 to 4 or 5 days and then if needed every 3 or 4 days until the pattern stabilizes or becomes definite. The atypical graphic changes of coronary disease are usually associated with subendocardial or subepicardial

infarction and are not ordinarily transmural. An intramural infarction does not extend to the epicardium or endocardium of the heart, and therefore, may show no abnormal electrocardiographic findings. This unusual condition is caused by the blocking of the abnormal electromotive force from reaching the electrodes because of a layer of normal myocardium surrounding the intramural infarction. The electrocardiogram may fail to show characteristic patterns in cases of a small infarction of the heart. Multiple myocardial infarctions are common and are present in the vast majority of fatal coronary disease. Occassionally multiple myocardial infarctions may completely obscure the diagnostic electrocardiograpric pattern. Septal infarctions may also be present without pattern change but should be suspected in cases of suspicious clinical myocardial infarction when there is a sudden appearance of A-V block or bundle branch block. Abnormal electrocardiographic waves simulating the pattern of acute myocardial infarction may be produced by pulmonary infarctions, angina pectoris, syphilitic coronary orifice disease, pericarditis, all forms of disease of the coronary arteries and all causes of localized cardiac destruction. High lateral myocardial infarctions may be difficult or impossible to detect with the usual twelve lead electrocardiogram. In such cases it may be necessary to explore the precordial area one or two interspaces above the level of the conventional unipolar leads. With the proper use of the modern unipolar leads, however, it is very infrequent that an electrocardiogram fails to show abnormal electrophysiological change in cases of acute myocardial infarction.

The electrical evolutionary pattern changes noted during the healing state of a recent myocardial infarction is an extremely difficult correlation for the cardiographer. The practicing physician frequently requests this opinion. Ordinarily this is a hazardous interpretation and should be so stated with cautious wording because the electrocardiogram does not always show accurate evidence of progression or regression of a disease process. A second acute myocardial infarction in the opposite ventricular wall may neutralize and balance the electrical potentiality of the primary infarction so as to show no evidence of either infarction. A false impression of improvement and healing of the area infarcted would therefore be given when actually the heart would be in a more serious state. It is true, however, that many patterns do return to a fairly normal or frankly normal curve and one may assume that such a pattern is associated with healing. A fair number of graphs show a gradual return to a more normal pattern, but may retain abnormal features such as a pathological Q wave which maybe the only vestige of the healed myocardial infarction. Some curves remain frankly abnormal for months and years, although clinically such patients remain in a fairly good state of health. Why some patterns remain abnormal and out of proportion to the clinical state of the patient remains unknown.

The clinical diagnosis of angina pectoris is usually made from the history of characteristic precordial distress and its response to the use of coronary dilators. Although the electrocardiogram is quite normal in most cases of uncomplicated angina pectoris one cannot assume therefore that the heart is free of coronary disease. Complicated angina pectoris may show electrocardiographic evidence of coronary disease and not infrequently the presence of recent or old myocardial infarctions. The prognosis of angina pectoris with abnormal electrocardiographic findings indicate a more serious outlook. In those cases of uncomplicated angina pectoris, where the diagnosis is not certain the functional tests of coronary anoxia such as the use of the Master Two Step test are sometimes of diagnostic aid. These tests include an electrocardiographic record taken during an attack of induced angina pain and may show changes that will support a diagnosis of angina pectoris.

The nomenclature of certain electrocardiographic terms is sometimes confusing to the practitioner. It is unfortunate that the expression of abnormal electrical potentiality has been so poorly termed myocardial damage. In the past, the electrocardiographer used the term myocardial damage for those changes that showed a deviation from normal, yet failed to fit a specific pattern. Actually, an appreciable number of these so-called abnormal patterns are due to conditions unrelated to damage of the heart muscle. Normal position variations have been shown by the twelve lead electrocardiogram to explain some of the electrical changes that were formerly termed myocardial damage. Electrolyte change, extra-cardiac disease, glandular and nutritional disturbance, and a host of other con-

ditions may produce electrical changes which may not be related to myocardial damage. The word *damage* connotes disease, and should never be used in the interpretation of the electrocardiogram. The finding of a nonspecific abnormal condition should not be stated as a clinical diagnosis, but rather in terms of detailed electrophysiological change. This phase of electrocardiographic interpretation is of the greatest importance because the interpretation is only as good as its interpreter. More than any other factor, errors in careless judgment have placed the electrocardiographic interpretation in unjustifiable disrepute. The practicing physician must be acquainted with the general objectives that the electrocardiographer wishes to convey in the clinical interpretation. The reeducation of the physician to a more accurate terminology of the electrocardiogram can readily be attained by a careful wording of the interpretation.

The general practitioner should be acquainted with the meaning of various electrocardiographic terms. Low voltage, ventricular strain patterns, partial A-V heart block and bundle branch block are conditions detected mainly by the electrocardiogram. Low voltage, for example, is purely an electrophysiological condition and may be a difficult clinical correlation. The finding of this condition in the unipolar leads and especially in the precordial leads is of greater clinical importance than when found only in the standard leads (lead I, II and III). As a single finding in the standard leads, low voltage is not an infrequent normal variant. Poor electrical conduction media surrounding the heat in such cases as emphysema, obesity, thick thoracic walls and stocky builds may be a normal caustative factor of low voltage. Unusually good conductors of cardiac current may produce low voltage by a short circuiting mechanism, shunting currents back to the heart and away from the electrodes. This occurs in the presence of fluid in the body and tissue spaces and is commonly seen in cases of pericarditis with effusion, ascities, myxedema and pleural effusion. Other causes of low voltage may be found in cases of Pick's disease, glandular disturbance, vitamin and nutritional deficiencies, mediastinal and pulmonary tumors, pneumonia and various lung diseases. Almost all forms of organic heart disease may produce low voltage. This condition is especially common and significant in coronary heart disease. Low voltage in cases of organic heart disease is produced by virtue of the disturbed conduction through normal and abnormal areas of the heart muscle, neutralizing and interfering by block mechanism with the production of adequate cardiac currents.

Ventricular hypertrophy and strain patterns of the electrocardiogram have been generally used as interchangeable terms. Left ventricular hypertrophy and strain patterns indicate that an overload of the left ventricle is present and is producing an abnormal functional change of electrical conduction in the left ventricular myocardium. Clinically this condition is usually found in the severe and later stages of hypertension, aortic insufficiency and/or stenosis and coronary disease.

Right ventricular hypertrophy and strain pattern usually indicate that an overload of the right ventricle is present and is producing an abnormal functional change in the right ventricular myocardium. This condition is usually found in cases of mitral stenosis, cor pulmonale, congenital heart disease, and scoliosis of the spine. The heart is ordinarily in a vertical electrical position of the chest. Left or right ventricular strain patterns are generally correlated as true from the clinical, x-ray, and post mortem findings. Although these statements are usually correct, certain discrepancies arise that fail to correlate with the clinical findings. These patterns may not indicate the severity of the cardiac disease process. Strain patterns may be reversible with or without an obvious cause. This electrocardiographic finding may be absent in severe clinical hypertension and in proven postmortem cases of advanced hypertensive heart disease. Furthermore, the exact physio-pathological nature of the electrocardiographic changes of strain patterns are unknown. Generally, however, a typical pattern of ventricular strain may usually indicate a greater abnormal physiopathological process of the heart than in similar cases that fail to show strain pattern.

Heart block indicates the presence of an abnormal prolonged electrical conduction. It is almost always due to an organic myocardial disturbance. The state of heart block may be of short or long standing. Fleeting or intermittent heart block is less serious than a long standing condition. There are two important common forms of heart block: (1) A-V heart block indi-

cates an abnormal conduction between the auricles and ventricles, and (2) bundle branch block which is found in conditions that interfere with normal electrical conduction in the ventricles. A-V heart block may be classified as occurring in three clinical forms: (1) A-V heart block of the partial or first degree type. In this condition the conduction time is merely prolonged. Each auricular impulse, although delayed, reaches and excites a ventricular contraction. (2) A-V heart block of the incomplete or second degree type. In this form of heart block some of the auriculor impulses fail to reach the ventricles. (3) The last type, complete A-V heart block, is present when the auricular impulses fail to reach the ventricles and the former and latter beat independently of each other.

Generally, the presence of a P-R interval (from the beginning of auricular excitation to the beginning of ventricular conduction) over 0.20 seconds in an adult and over 0.18 seconds in a child under eight to ten years of age, indicates the presence of partial or 1st degree A-V heart block. Not only age, but weight and especially cardiac rate, are important in the classification of a borderline PR intervals as possible partial heart block. A rate of 70 per minute in a large adult male will allow a classification of a PR interval of 0.21 seconds as a normal finding, whereas a rate of 130 per minute in the same individual with a PR interval of 0.18 seconds should be classified as a partial or first degree A-V heart block. Similarly, a rate of 70 per minute in a child of two to six years of age, with a PR interval of 0.16 seconds is the upper limits of normal whereas a rate of 130 per minute would indicate a definite first degree A-V heart block. However, a slight abnormal prolongation of the PR interval producing a partial heart block, without a history of heart disease, should not be the sole reason for the diagnosis of cardiac disease. Vagotonia, cartotid sinus sensitivity and digitalis effect may produce a mild partial block in a normal heart. Conduction fatigue secondary to prolonged tachycardia is reversible and not indicative of serious organic heart disease. Various infections especially of the upper respiratory type without evidence of rheumatic fever or diphtheria, may produce unimportant mild and temporary prolongation of the PR intreval. Significant A-V heart block may occur in organic heart conditions when there is present degeneration or vascular disturbance, and in toxic or inflammatory processes of the heart. Heart block is found most commonly in elderly patients with arteriosclerotic heart disease. Active rheumatic fever may produce a prolongation of the PR interval. This is commonly found if serial graphs are taken. More severe degrees of heart block are less commonly found, but generally indicate the severity of the cardiac lesion. First degree A-V heart block may occassionally persist for years without evidence of an active disease process. Fibrosis and calcification of the mitral valve may compress the conduction system and produce a persistent heart block. Auricular hypertrophy may by increasing the height and width of the P wave produce a prolonged P-R interval. The late stages of hypertensive heart disease and syphilitic aortic disease complicated by coronary orifice involvement are not uncommonly found with various stages of heart block. Complete heart block is found most frequently in senile heart disease, coronary sclerosis, and in old advanced rheumatic mitral valvular disease.

Bundle branch block (QRS interval prolonged 0.12 seconds or more) is entirely an electrocardiographic finding. Bundle branch block is the name generally used for an impaired or depressed conduction of the electromotive force through the ventricles. The normal pathway of conduction to the ventricles is from the lower node by way of the common bundle to the right and left bundle branches. The impulse then reaches the myocardial fibers by way of the Purkinje system.

Chronic or persistent bundle branch block is almost always indicative of serious organic heart disease. Intermittent or transient block is usually associated with less serious cardiac involvement. Wolff-Parkinson-White syndrome, characterized by a short PR interval and wide QRS complex is not a true bundle branch block and is a normal conduction variant in the vast majority of cases.

Bundle branch block is found most frequently after the age of 50 years. Hypertensive and coronary heart disease are the most frequent causes of bundle branch heart block, while rheumatic heart disease and syphilitic heart disease are relatively less commonly found. Transient bundle branch block is occassionally associated with congestive heart failure of the acute type, recent

myocardial infarctions and acute infections. Quinidine and related drugs as well as electrolyte disturbance may produce a marked depression of the ventricular cardiac conduction.

The most important prognostic criteria of bundle branch block is not dependent upon whether the right or left bundle lesion is present but rather upon the nature of the underlying disease process. Bundle branch block in the presence of cardiac enlargement or poor cardiac reserve is especially a serious prognostic sign. The overall survival rate of bundle branch block is about 3 years. Progressive heart disease with this type of cardiac lesion indicates that the outlook is poor and limited, very few patients live more than one or two years. If the cardiac disease is not rapidly progressive and the patient survives the first year the average life span may then be close to 5 years. Right bundle branch block in the presence of rheumatic heart disease usually indicates a very serious prognosis. Patients with bundle branch block and hypertension without evidence of coronary disease have a longer life span. Generally individuals with right or left bundle branch block, without detectable abnormal cardiac finding, or heart disease without obvious etiology, have the best prognosis. This is especially true in the right bundle branch block type, most of these individuals live longer than 5 years.

The association of an acute myocardial infarction and bundle branch block is not an infrequent condition and is one of the most serious prognostic signs in the latter condition. It should be noted that the electrocardiographic pattern of an acute myocardial infarction is almost never found in cases of left bundle branch block. The electrical potential in such conditions is so abnormally conducted from the right to the left ventricle as to completely obscure the characteristic pattern of an acute myocardial infarction. In right bundle branch block, however, the path of electrical conduction passes through the left ventricle before proceeding to the right thereby allowing the area of infarction to be characteristically patterned in those leads that face the left ventricle.

INTERPRETATION OF THE ELECTROCARDIOGRAM

The purpose of the electrocardiogram is to record the changes in potential effected in the heart during depolarization and repolarization. Obviously, it would not be feasible to record the electrical changes in all areas of the heart at one time. Therefore attention is focused on isolated areas of the heart through various leads or electrodes. The modern electrocardiogram should consist of at least twelve leads including three unipolar limb leads, the three bipolar conventional limb leads and six unipolar chest leads. The electrode of a unipolar lead can be likened to a camera lens through which a recording or picture is made of a certain area of the heart. The electrode through which the focus is made is the exploring electrode. The other electrodes, indifferent electrodes whose charge is practically nil, are needed to complete the circuit through the galvanometer. The leads are named according to the position of the exploring electrode, that is AVR, AVL, and AVF focus upon the heart from the right shoulder, left shoulder and region of the left groin respectively. These unipolar limb leads each focuses upon a large area of the heart. For instance, AVL looks at the heart from the left shoulder and focuses upon the entire left lateral aspects of the heart. The unipolar chest leads (V precordial leads) on the other hand, get a closeup view of smaller areas of the heart. The conventional limb leads I, II and III are not unipolar but view the heart through two electrodes. For example, lead I is connected between electrodes in the left arm and right arm and is therefore the algebraic summation of leads AVL and AVR. From the above discussion it can be seen that the position of the exploring electrode has a fundamental effect on the recorded pattern. It is attempted, therefore, that every area of the myocardium is explored. This is practically the case when AVR, AVL and AVF and the six usual precordial leads V_1 to V_6 are taken. These leads are placed as follows: V_1 is on the fourth intercostal space to the right of the sternal border; V_2 in the fourth intercostal space to the left of the sternal border; V_3 is between V_2 and V_4 which is in the fifth intercostal space at the mid-clavicular line; V_5 and V_6 are in a line horizontal to V_4 on the anterior axillary line and mid-axillary line respectively. However, at times the cardiologist may want a "close-up" view of the high lateral aspect of the heart through leads above V_4, V_5 and V_6, or he may want to more closely examine the posterior aspect of the heart through esophageal leads. The occasion to use these leads is

unusual, but they do serve to illustrate the principles of unipolar electrocardiography.

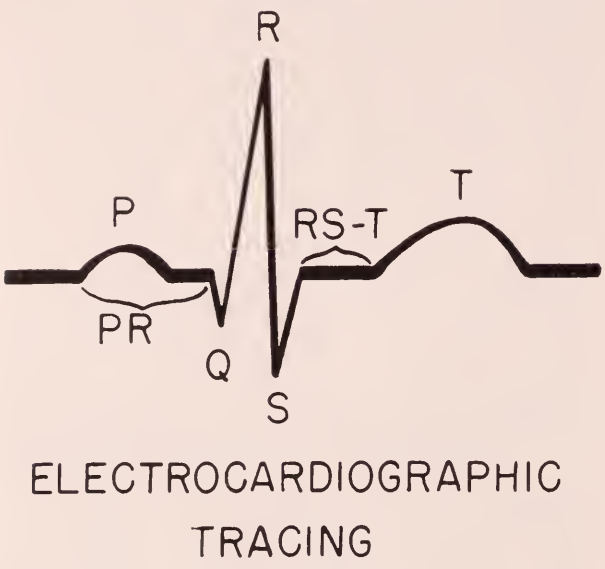


Figure 2.—The naming of the electrocardiographic deflections.

Normal Basic Patterns:—The normal electrocardiographic complex consists of P-Q-R-S-T and occasionally U waves (See Figure 2). The impulse of stimulation is initiated at the sino-auricular node, the pace-maker, and spreads throughout the auricular myocardium (See Figure 3). This portion of electrical activity in the auricles forms the P wave. The impulse is then picked up by the atrio-ventricular node which is located in the junctional tissue between the auricles and ventricles. The impulse then passes down a short common bundle located in the upper portion of the septum which soon splits into right and left bundle branches. The septal myocardium is normally depolarized from the left side to the right. When the bundles reach the free ventricular walls, they arborize in the subendocardial myocardium, forming the Purkinje system. Finally the impulses spread from the subendocardial Purkinje fibers peripherally through the myocardium to the epicardial surface. This electrical activity through the septum and ventricle forms the QRS complex, the Q being the initial downward deflection, R the initial upward deflection and S the downward deflection following the R. So far, only depolarization waves have been described. This repolarization wave of the auricle may be a small negative wave following the P and it is often lost in the QRS complex. The repolarization of the ventricles is of great importance. The T wave is the wave of ventricular repolarization. It would be expected that since this is the opposite process of depolarization the T wave would be in a direction opposite to the QRS complex. This would be true, if, as might be expected, repolarization spread from the endocardium to the epicardial surface, as is the order of depolarization. However, for reasons yet not fully understood, the repolarization process spreads from the epicardial surface to the endocardial surface. Therefore, the T wave observed in leads facing the epicardium is normally upright.

There are three normal basic patterns that are factors in the makeup of any normal electrocardiographic tracing: (1) left ventricular pattern, (2) right ventricular pattern, (3) endocardial patterns (See Figure 3). It has been mentioned above that polarized areas of myocardium are of positive charge in relation to the oncoming depolarization wave of stimulation. This positivity is recorded on the electrocardio-

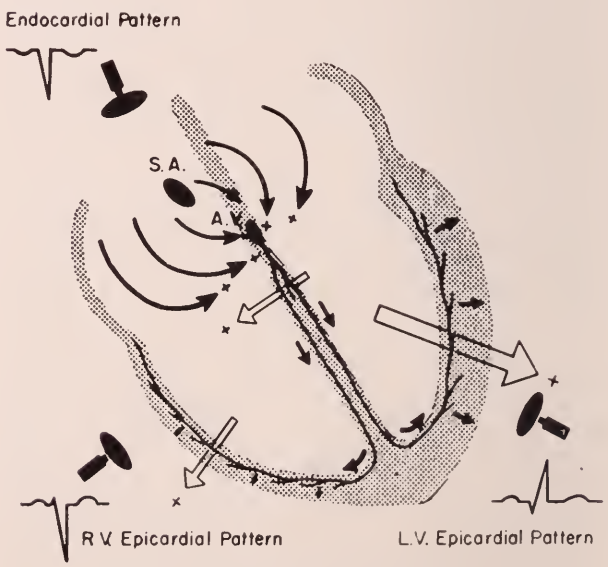


Figure 3.—Normal conduction starting at the SA node extending through the auricles to the AV node, down the common bundle, through the bundle branches and finally in the Purkinje system which is located in the subendocardial myocardium. Note that the myocardium of the septum is depolarized from left to right and depolarization of the ventricular myocardium at any one spot extends from the endocardium to the epicardium. The three basic patterns are illustrated as seen in leads facing the left epicardium (for example, V_5 and V_6), the right epicardium (for example V_1 and V_2), and endocardium (for example aVR).

gram as deflection above the isoelectric base-line producing upright waves. On the other hand, if the positivity is in a direction away from the electrode the tracing will show a downward deflection or a negative wave.

The myocardium of the left ventricle is the thickest portion of myocardium. As depolarization spreads in the ventricles from endocardium to epicardium, the left ventricle because of its thickness exhibits a greater positive charge than the right ventricle. An electrode placed so that it "focuses" on the left ventricular epicardium may show an initial small Q wave since it also faces the septum which is depolarized from left to right. Following the Q it will show a strong upward deflection or, in other words, an upright "R" pattern. Also, the T wave is upright and, since the point of focus is below the S-A node, the P wave is upright. This pattern is usually seen in V_4 to V_6.

On the other hand the right ventricle, having a thin myocardium exerts a lesser positive charge. An electrode placed so as to focus mainly on the right ventricular epicardium will be influenced by the greater positivity of the left ventricle but in a direction away from the electrode. Its resulting pattern will be a downward deflection, or mainly an S pattern. Preceding this S wave, there may be a small R due to a combination of septal depolarization from left to right and early right ventricular activation. The P is upright since the electrode faces the oncoming impulse from below the S-A node and the T is upright. The pattern of the right ventricular epicardium is therefore an upright P wave, a small R wave followed by a deep S wave and an upright T wave. This pattern is usually found in V_1 and V_2.

The endocardial pattern is found in AVR. This is to be expected since an electrode focusing upon the heart from the right shoulder would be looking inside the ventricles. All electrical activity is in a direction away from the electrode resulting in a pattern of inverted P wave, inverted QS wave and inverted T wave. This pattern may also be found in right precordial leads including V_1.

A septal pattern is a combination of right and left ventricular patterns with a moderately high R wave and a moderately deep S wave usually found in V_2 to V_4.

It is from the above basic patterns that the electrical positions of the heart can be estimated. Though it is not within the scope of this paper to discuss those positions in detail, the following examples will illustrate the principle involved. If AVL shows a definite left ventricular pattern, that is, resembles V_5 and V_6, and AVF shows a definite right ventricular pattern or resembles V_1 and V_2, one could conclude that the major portion of the left ventricle is facing the left shoulder. This would indicate a horizontally placed heart. On the other hand, AVL resembling AVR in showing an endocardial pattern would indicate a markedly vertical heart. In general, the heart positions are influenced by rotation on its three axes: the anteroposterior axis, the longitudinal axis, and the axis through the heart laterally. Positions of rotation in the antero-posterior axis are described as horizontal, semi-horizontal, intermediate, semi-vertical, vertical and, when no definite position is apparent, indeterminate. Rotation in the longitudinal axis is clockwise or counter-clockwise as viewed (with the face of the clock pointing downward) from the inferior aspect of the heart. Thus, clockwise rotation would move the right ventricle into a more anterior position with the left ventricle moving from a lateral to a more posterior position. The right ventricular pattern then appears over to V_4 or V_5. Counter clockwise rotation is opposite with the left ventricle moving anterior and its pattern starting in V_2-V_4. Rotation in the lateral axis is described as forward and backward movement of the apex. Position on these axes form in usual combinations. For instance, a heart that is horizontal is usually also counter-clockwise. Position is always diagnosed by noting which basic pattern or combination of basic patterns is facing each of the unipolar leads.

As is illustrated in the above examples, the basic patterns are made workable. Although the practical value of knowning positions may not be readily apparent, suffice it to say, that knowledge of an unusual position of the heart may explain a normal deviation such as a fairly prominent Q wave or an inverted T wave that might otherwise have been considered pathological.

Effect of Pathology on Pattern.—The myocardium may suffer pathology that can generally be classified as anoxia, injury, necrosis or a combination of these. These may be caused by a

compromised blood supply as in hypertrophy and coronary occlusion, by drugs such as quinidine, digitalis, by external toxins as chloroform, and by abnormal bio-chemical deviations such as abnormal blood potassium, calcium, etc.

Anoxia causes only changes in T wave direction (See Figure 4). As has been described above, the normal repolarization process spreads from the epicardium to the endocardium resulting in an upright T wave. In the presence of subepicardial anoxia, the repolarization will tend to be initiated in the subendocardial region resulting in a blunted or inverted T wave. On the other hand, and less frequent, should the subendocardial myocardium suffer anoxia, the T waves would increase in voltage.

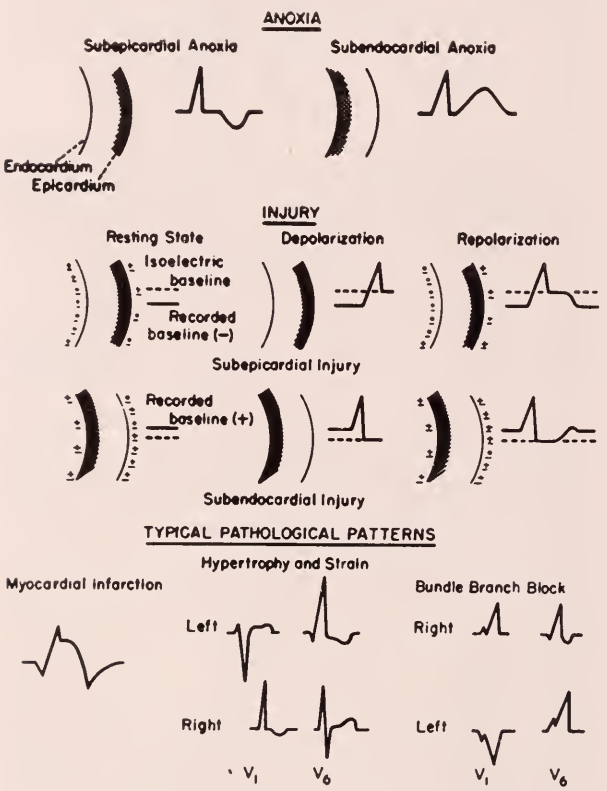


Figure 4.—Pathologic changes are represented. The top illustrates anoxia. Subepicardial anoxia delays subepicardial repolarization allowing this process to start abnormally in the endocardial area resulting in an inverted T wave. Subendocardial anoxia delays repolarization in this area, emphasizing the normal T wave. Subepicardial injury, illustrated in line 2, is characterized by partial depolarization and thus relative negativity of tissue closest to the epicardial lead. This results in the recorded baseline, during the resting state, being deviated downward. This accounts for the apparently elevated RST segment immediately after depolarization, at which time, no charge exists and the electrocardiograph records on the isoelectric baseline. Subendocardial injury, illustrated in line 3, is the exact counterpart of this process. The bottom illustration represents three pathological entities. Myocardial infarction pattern is characterized by a deep wide Q wave which is the result of an "electrical window" in the myocardium, through which the endocardial pattern is recorded. The RST-T changes are as explained in the text. The next two illustrations show typical right and left ventricular hypertrophy, and strain, and right and left bundle branch block as seen in left epicardial leads (represented by V_6) and right epicardial leads (represented by V_1).

Injury causes RS-T segment deviation (See Figure 4). In the case of injury the myocardium is in a state of partial depolarization. The subepicardial myocardium is involved in injury as seen in infarctions and in pericarditis. In such a case the epicardium, being partially depolarized is negative in relation to the endocardium. Consequently, in the resting state the base line of the electrocardiographic pattern is depressed below the normal isoelectric base line. Then, following complete depolarization, that is, following the QRS pattern, at which time no electrical activity exists, the RS-T segment is located on the isoelectric line above the pathologically depressed base line. The RS-T segment, therefore, appears elevated in subepicardial injury. The reverse is true in subendocardial injury, that is, the RS-T segment is depressed in relation to an abnormally elevated base line.

Necrosis of the myocardium is recorded in the electrocardiogram as an abnormal Q wave. A necrotic mass of myocardium is obviously incapable of transmission of any electrical impulse. A necrotic area is therefore an electrical "window" and would record the electrical pattern that it sees through the "window". This would be the endocardial pattern of the ventricles, a negative wave, the Q wave. Whether or not it is a pure Q wave or a QR pattern would depend upon whether the electrode is focused only upon electrically inert necrotic tissue or upon this tissue plus surrounding active tissue. From the above discussion it can be construed that for the necrotic tissue to act as a "window" and produce a Q wave it must be transmural or nearly transmural. If the necrotic tissue is only a small mass within the wall a Q wave will not be produced. It was mentioned at the outset of this discussion on necrosis that this condition is characterized by an abnormal Q wave. This would imply that Q waves may be within normal limits. Such is often the case. If a Q wave is at least 0.04 seconds in duration and at least 25% of the QRS pattern amplitude in the leads where it is present, it is considered certainly abnormal. However, an abnormal Q wave may not measure up to all these

qualifications in which case the remainder of the pattern, that is, RS-T segment and T wave abnormalities may help indicate definite pathology. The diagnosis of a normal Q wave is sometimes difficult. One of the more common normal Q waves is the "septal Q". As has been noted before under the discussion of normal conduction of the stimulating impulse through the heart, in the septum, the electrical impulse passes from the left to the right side of the septum. If an electrode is so placed that it faces directly the left side of the septum, this impulse passing from left to right or in a direction away from the electrode would be recorded as a Q wave. This is the mechanism of the "septal Q". Other reasons for normal Q waves have been suggested such as more rapid depolarization in sections of myocardium away from that section facing the electrode. An isolated Q wave in bipolar lead III is of little significance. Its explanation is more involved. The depolarization of the myocardium facing the left shoulder is recorded in lead III in a negative direction. Often the rate of depolarization in this area is rapid and its early onset will record in lead III as a Q wave. The above discussions would indicate that whether or not a Q wave is significant may present much of a problem. Conclusions can often be reached only after careful consideration of such factors as position and presence or absence of other abnormalities.

Pathological Entities:—Pathological entities as diagnosed from the electrocardiogram are myocardial infarction, myocardial strain and hypertrophy, bundle branch block, pericarditis, pulmonary infarction, the effects of drugs, chemicals and abnormal activity and arrhythmias. In most of these cases, the specific pattern is one or a combination of patterns described in the previous section on fundamental pathological patterns.

Myocardial infarction has often been called the "raison d'etre" of the electrocardiogram (See Figure 4). The diagnosis of this condition is its most important contribution. A myocardial infarct consist of a core-like necrotic area, usually practically transmural, surrounded by zone of injury and finally a zone of ischemia or anoxia. The latter two zones are usually wider in the epicardial area. The necrotic zone produces a Q wave. The zone of injury mainly epicardial, produces an elevated RS-T segment, and the zone of anoxia, mainly epicardial, produces an inverted T wave. Thus, the typical infarction pattern consists of a Q wave, an elevated RS-T segment and an inverted T wave. The T wave is typically round-shouldered, sharp and symmetrical. Often the inverted T wave does not occur until the elevated RS-T segment is dropping toward normal indicating that some of the zone of injury is becoming merely anoxic. This pattern usually appears in isolated groups of leads depending upon the position of the infarct. If it records most plainly on V_2 to V_4 an anteroseptal infarct is indicated; V_5, V_6 and AVL indicates lateral; AVF indicates posterior infarction; combinations of the above would indicate anterolateral, posterolateral and sometimes ateroposterior infarction. Posterior myocardial infarction may sometimes be definitely indicated only in AVF. Lateral infarctions may be seen only in AVL in which case more information may be obtained from precordial leads above V_4, V_5, and V_6. Infarctions may be atypical in that the marginal injury is subendocardial rather than subepicardial. In such a case, as would be expected, the ST deviation is downward rather than upward. Also atypical is the small intramural infarction that does not produce a Q wave. In all infarctions the sequence of appearance of electrocardiographic changes is variable and when recent myocardial infarction is suspected serial electrocardiograms are usually imperative.

As has been stated above, uncomplicated angina pectoris may show no electrocardiographic abnormalities. However, the electrocardiogram may be of aid in the diagnosis in that during exercise, patients with angina pectoris suffer myocardial anoxia which would appear as T wave damage. This is the basis of exercise tests for angina pectoris.

Pericarditis consists of subepicardial injury and ischemia that usually is diffuse. Early in the disease there is elevation of the RS-T segments in most of the epicardial leads. The RS-T segments return to normal and the T waves become inverted. There is often low voltage because of pericardial fluid or because of thickened pericardium. If the pericarditis is localized, the pattern will appear only in leads facing that area. Unlike the pattern in myocardial infarction, there is usually no reciprocal pattern in pericarditis. The reciprocal pattern is a mirror image of the infarction pattern in leads facing

that aspect of the heart opposite the lesion. Significant Q waves are commonly found in cases of myocardial infarction whereas in uncomplicated pericarditis abnormal Q waves are practically never found.

Before continuing with ventricular hypertrophy and bundle branch block, the term "intrinsicoid deflection" should be understood. The intrinsicoid deflection refers to the downstroke beginning at the peak or possibly just beyond the peak (nadir) of the R wave. This "onset of the intrinsicoid deflection" is important because it designates the moment that electrical activity in the underlying myocardium has completed its course at the epicardial surface. The time of the onset of the intrinsicoid deflection is the interval between the beginning of the QRS complex and the onset of the intrinsicoid deflection. This interval obviously is a measure of the time elapsed between the beginning of septal depolarization and the completion of the impulse at the epicardial surface. This interval is usually 0.02 or 0.03 seconds in leads facing right ventricular epicardium and up to 0.05 seconds in leads facing left ventricular epicardium.

Ventricular hypertrophy (See Figure 4) and ventricular strain have been described as isolated findings or in combination, hypertrophy referring only to the QRS change and strain to the ST-T changes. However, these findings are usually in combination as part of a single picture and heretofore will be spoken of only as hypertrophy. Left ventricular hypertrophy is characterized by the following findings: (1) There is increased voltage of the R wave in leads facing the left ventricular epicardium (V_5, V_6, usually AVL and lead I). This is the result of an increased electrical potential in the thickened myocardium. It must be borne in mind that voltage changes can be affected also by extra-myocardial factors such as pleural effusion, obesity, etc. (2) The onset of the intrinsicoid deflection is increased to more than 0.05 seconds in the left epicardial leads as a result of the greater time required to depolarize the thickened left ventricular myocardium. (3) The typical RS-T segment and T wave changes occur in left ventricular epicardial leads. These consist of blunting and finally inversion of the T wave with the wave retaining its asymmetrical contour. The RS-T segment tends toward negativity and finally is depressed with the typical "roller-coaster" contour. (3) The mirror image of the above described pattern appears in leads facing the right ventricle, (V_1, V_2, usually AVF and lead III), that is a deep S wave, the RS-T segment tends to be elevated and the T wave is positive. (4) Because of enlargement of the left ventricle, the heart commonly assumes a horizontal position with counter-clockwise rotation.

Right ventricular hypertrophy likewise shows similar changes but in opposite leads. (1) In leads facing the right ventricular epicardial surface (V_1, V_2), usually AVF and lead III). There is increased voltage of the R wave, a delayed onset of the intrinsicoid deflection to beyond 0.03 seconds, RS-T segment depression and T wave inversion. Occasionally the changes are only suggestive in these leads and a more typical pattern may sometimes be obtained in V_3R or V_4R (the same positions as V_3 and V_4 but on the right side of the chest.) (2) In leads facing the left ventricular epicardial surface there is an exaggerated S wave, the RS-T segment tends to be elevated and the T wave is positive. (3) Because of right ventricular enlargement, the heart usually undergoes clockwise rotation.

The effect of digitalis upon the electrocardiogram is the most important of changes due to drugs. There is inversion of the T wave in leads with upright QRS pattern. The RS-T segment becomes diagonal producing a check mark appearance. Later, there is a prolongation of the PR interval or first degree heart block. The Q-T interval, from the beginning of the Q wave to the end of the T wave, is shortened. Later, ventricular extrasystoles appear and a bigeminy rhythm consisting of the repeated sequence of a normal beat followed by a ventricular premature contraction. Further changes are complete heart block and an increasing number of aberrant ventricular beats. Quinidine may cause blunting and inversion of the T waves. The QT interval may become prolonged. Conduction defects such as prolonged PR interval, sinus arrest and intraventricular conduction defects may also occur.

Hyperpotassemia is recorded on the electrocardiogram as tall, narrow, peaked T waves. In toxic levels the QRS complex becomes widened, P waves disappear and the T waves are large and abnormal. Hypopotassemia, conversely is recorded as small or inverted T waves. Also the Q-T interval becomes prolonged.

Calcium changes also effect the electrocardiogram. Characteristically, hypocalcemia causes a prolonged Q-T interval with the major lengthening occurring in the RS-T segment. Hypercalcemia usually causes the reverse, a shortened QT interval.

Bundle branch block (See Figure 4) is a condition in which a normally initiated impulse is blocked in its passage through the right or left bundle branch. Such cases are characterized by a normal PR interval designating normal initiation of the impulse and normal passage to the A-V node, that is followed by a wide QRS pattern (0.12 seconds or more) designating delayed conduction below the A-V node. Thus, in left bundle branch block, the impulse passes normally from the S-A node to the A-V node. There is Conduction down the common bundle but at the left bundle branch, the impulse is blocked and must pass only down the right bundle. Consequently, the septum is depolarized abnormally from right to left. Since conduction through the right bundle is normal the right ventricle is normally depolarized. In the meantime, the impulse passes over to the left side below the block through a devious route and the left ventricle is finally depolarized after a delay. Electrocardiographically, the pattern would appear as follows. Because of normal auricular conduction there is a normal P wave and a normal P-R interval. In leads facing the right epicardial surface (V_1, V_2), there may be a small initial negative deflection because of septal depolarization abnormally from right to left, or away from the electrode. The right ventricle then is normally depolarized resulting in a small narrow upright deflection. Finally, the left ventricular depolarization is recorded in this lead as a deep S wave as it is in a direction away from the electrode. It should be noted that in leads facing the right ventricular epicardium in left bundle branch block, the onset of the intrinsicoid deflection is normal. In leads facing the left ventricle (V_5, V_6), there is an initial upward deflection resulting from the abnormal septal right to left depolarization. (The normal septal Q wave is never present in left bundle branch block.) Then, there is a small negative deflection as the right ventricle is depolarized which is followed finally by a high second upright deflection of left ventricular depolarization. The onset of the intrinsicoid deflection in such a lead is markedly delayed (0.07 to 0.08 second). In the unipolar limb leads AVL usually resembles V_5 and V_6. The QRS in AVR is wide and usually uniformly negative. In summary, left bundle branch block is characterized by: (1) normal P wave and PR interval; (2) a QRS of 0.12 second or more; (3) an early peak of the R wave (onset of the intrinsicoid deflection) in leads facing the right epicardium and a delayed attainment of the peak (intrinsicoid onset) in left ventricular leads; (4) an initial upright deflection in left ventricular leads, never a Q wave, signifying abnormal septal conduction.

Right bundle branch block is practically an exact counter-part of the left bundle branch block. There is a normal P wave and PR interval as auricular conduction is unaffected. As the impulse passes down the left bundle alone, the septum is depolarized from left to right. This records in leads facing the right epicardium (V_1, V_2) as an initial upright deflection. The downward deflection that follows is a result of normal left ventricular depolarization (in a direction away from the electrode). Finally, the right ventricle is depolarized causing a final prominent upright deflection. The onset of the intrinsicoid deflection is thus delayed in leads facing the right ventricular epicardium. In leads facing the left ventricular epicardium, there is an initial Q wave as the septum is normally depolarized. The left ventricle is then depolarized causing a normal R. Finally, a delayed blunt S wave is recorded as the right ventricle is activated. As should be noted, the onset of the intrinsicoid deflection is normal in such a lead. In right bundle branch block, AVR is of importance in that its broad upright R indicating abnormal right ventricular activation is practically pathognomonic.

Incomplete bundle branch block is characterized by patterns similar to those described but the QRS interval does not exceed 0.12 second.

Combinations of several of the above described pathological entities may occur in various clinical syndromes. Pulmonary embolism causes myocardial anoxia with its accompanying electrocardiographic pattern. Also, clinically associated with pulmonary embolism is acute right ventricular dilatation which in turn causes the heart to assume a vertical, clockwise position. Right ventricular strain pattern may occur and be-

cause of the positional changes a Q wave may appear in AVF. In such a case, differentiation from a posterior myocardial infarction pattern may be difficult.

Syndromes resulting from electrolyte changes may be reflected in the electrocardiogram. Thus, in uremia the combined patterns of hyperpotassemia, which is often present, and hypocalcemia are recorded. In some cases hypopotassemia is present. In Addison's disease, the pattern of hyperpotassemia characterizes the electrocardiogram. Diabetic acidosis may show the pattern of hypopotassemia. Certain calcium changes will be recorded in parathyroid disturbances and in metastatic bone diseases.

Myxedema, thiamin deficiency heart, as well as a host of other diseases including diphtheria, scarlet fever, pneumonia, trichinosis, cause T wave changes, the mechanism of which is not clearly understood. In myxedema there is low voltage probably a result of fluid accumulation in the skin and subcutaneous tissue.

The electrocardiogram is a useful aid in the diagnosis of specific congenital heart disease in that the changes in various chambers, position, strain, hypertrophy, etc., can be recorded.

In conclusion the purpose of this article is to emphasize: (1) the value of the modern electrocardiogram; (2) that the advent of the unipolar leads have added considerable clarity to the understanding and diagnostic use of the electrocardiogram; (3) the responsibility of the clinical correlation of the electrocardiogram rests primarily upon the practicing physician and therefore it is urged that at least the basic principles of the electrocardiogram be understood in order that the cardiac and non-cardiac patient receives adequate management; (4) that the proper use of the electrocardiogram is an exact diagnostic procedure.

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Revised Mental Health Act (Continued)

certificate be presented to the hospital superintendent within forty-eight hours of the medical examination.

With the above requirements in mind, it is advisable that the examining physician recommend to the interested parties that they contact either their local County Judge or the State's Attorney in order that the necessary legal steps be taken before the patient is presented to the hospital superintendent for examination and/or detention.

Any violation of the Mental Health Act, including the physician's failure to make the examination personally *on the date of certification,* exposes the doctor to a fine or imprisonment, or both, or to a civil action for false arrest, false imprisonment or libel. As in other matters, ignorance of the law is no excuse, and knowledge of the law is presumed.

Birth Marks

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In presenting a paper on birth marks one must be brief and some of the interesting materials will then of necessity be omitted.

There is much misunderstanding regarding the cause of birth marks, the possibility of their successful treatment and the safety with which they may be removed. Even by such authoritative persons as administrators of some of the large hospitals has the statement been made that to remove a birth mark may lead to insanity or at least a serious psychosis and that in many instances such removal may result in the development of malignancy later in life. Among the laity there are many household beliefs that have existed for generations, such as the results of some strong impression, fear or shock experienced by the mother during the period of intrauterine life. There is, of course, no scientific basis for this belief but some cases furnish good evidence for the initial foundations for such conclusions and it might be interesting to give two examples:

(1) A woman who was very easily frightened by spiders was shocked during one of her pregnancies to the extent that she was sure that her baby would show a birth mark. This shock came from a brother who returned home one night with one of those artificial spiders which had coil springs for legs and was suspended upon a string which was attached to a stick. The brother came home to find his sister sewing in the living room. He quietly slipped up behind her and lowered this spider as if it were descending on its web so that it rested about six inches in front of the right side of her forehead. The experience was so real and she was so frightened that she insisted that the mark would be upon her soon-to-be-born child. When the baby did arrive, it presented a hemangioma not unlike the body of the spider with six projecting lines similar to legs on the side and the spot resembled in many characteristics the arachnid which produced the scare. In such a case as this it is difficult for the doctor to convince the patient that the incidence was merely accidental.

(2) A woman in moderate financial circumstances was very anxious to possess a sealskin fur jacket. Feeling that the purchase was almost prohibitive she began to save her money a little at a time, taking it from the household food allowance. Apparently she made a frequent practice of counting the money during her husband's absence. She had saved something in the neighborhood of $146 which she kept in a secret place in the china closet in the kitchen after she had counted it at the kitchen table. She thinks a burglar had been peering through a crack under the kitchen curtain because he broke into the house one night and demanded the money. The woman insisted she had no such roll of bills but after considerable torture with lighted cigarettes and otherwise, she admitted having the amount hidden away in the kitchen. The burglar went to the spot, located the money and, flashing the bills in the face of both this woman and her husband, left in a joyous mood. The woman fainted from the shock and, after being revived, insisted that her offspring would surely show signs of the unhappy event. When the child was born he presented an enormous, heavy nevus, pigmented and covered with dark hairs which covered the body from the neck to the buttocks with short extensions down both upper arms like the puffed sleeves of the jacket she had so coveted. Again such an incidence as this is difficult to explain except on the basis believed by the non-medical housewife.

However, if impressions such as these were to cause birth marks, then we would expect that from the recent period of war and from our everyday experience with automobile collisions and airplane wrecks we would have birth marks resembling airplane wings, automobile radiators and wheels and innumerable other characteristic patterns.

Upon asking Dr. William Allen Pusey — the dean of dermatologists in Chicago — what he

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thought might be the cause of birth marks, he replied, "My only belief is that it is a group of cells gone crazy and tissues that are not built according to specifications."

Let us now discuss the classifications under which birth marks should be considered: (1) Nevus pigmentosus or the ordinary pigmented mole; (2) nevus pilosus or those which contain hair and usually also some pigment; (3) nevus verrucosus which resembles a group of warts; (4) linear nevus made up of wart-like projections which often form in a line either straight or curved; (5) cerebelliform mole which resembles a portion of brain tissue projecting from the skull, both in color and texture; (6) vascular nevi, the first of which is the portwine mark or that nevus which is made up of very small blood vessels and usually lies flush with the surface of the skin. Then there is the nevus cavernosus made up of larger blood vessels or lymph vessels which usually project somewhat above the surface of the skin and is a bright red or purplish-red if made up of blood vessels and, if made up of lymph vessels, is soft and circumcribed but usually of the normal color of the skin. (7) Follicular nevi which are very rare and resemble a group of small blackheads in linear arrangement or groups.

Nevi may be seen on any part of the body and even in such locations as on the eyeball. One such case was seen by the author which began on the lower inner quadrant of the orbit and was making quite rapid growth until it had partially covered the iris. In all probability it would eventually have extended over the entire pupil, causing either complete or partial blindness. However, the portion of the sclera containing the nevus was removed surgically, the parts were sutured and healing was rapid.

Probably the most important factor in treatment of birth marks is selection of the method of treatment. In some the use of carbon dioxide snow pencil is all that is necessary. The pencil is made from snow collected in a chamois skin from the ordinary carbon dioxide tank used in every community for refrigerating the fountain drinks in drug stores. The snow is collected and pressed into a hollow tube until the pressed material resembles an ordinary piece of school chalk. This is then held with a small piece of chamois skin to avoid freezing the operator's fingers. It can be molded on a small toy iron to a shape closely resembling that of the nevus. It is then pressed against the nevus for a period ranging from 5 to 20 seconds, according to the tissues which underlie the deformity. The harder the tissue — as for instance on the forehead — the shorter the exposure and the softer the tissue — as for instance on the neck or cheek — the longer the exposure. This treatment causes a blister to form in about six to eight hours. The blister usually breaks on the second or third day and a crust is formed which remains in place for about a week. The crust then loosens and falls off to leave a small red spot the size of the frozen area which gradually fades out, leaving what appears to be a white scar. As time goes on, the pigment gradually grows in from the border of this scar until after a period of six weeks to two months almost no scar is discernible. This type of treatment is particularly applicable to pigmented nevus, hemangioma cavernosus and to small spider nevi which are made up of a central venule with fine radiating capillaries resembling a small red spider. When the spider nevus is treated, it is necessary only to freeze the central venule which supplies the small capillaries and they rapidly collapse.

In portwine marks if carbon dioxide pencil is used, there is great danger of leaving a mottled checkerboard appearance on the skin and so we employ a different method. Taking the carbon dioxide snow as it is recovered in the chamois skin from the tank, it is placed in a glass beaker with a glass stirring rod. A few drops of acetone are added at a time until the snow assumes the appearance of slush such as we see in the streets in the springtime. This is then collected on an ordinary cotton applicator on a stick and rapidly painted over the entire area involved in the portwine mark. If the mark is a very deep purple, it may be well to paint the area two or three times. And if the mark is very large, it is well to select a small part of it at a time for treatment and after that portion heals, treat the adjacent portion and it will be seen that if conservatively handled, almost no scarring will result.

Another method of treatment frequently used is that of the electric cautery, which is of particular value in treating spider nevus or small hemangioma, especially those little red spots seen so frequently on people of advancing years. The cautery will remove those spots, usually at one sitting and with very little pain and no in-

convenience to the patient. After the area has been treated with the electric cautery, the patient may bathe and wash the area with soap and water as usual, being careful not to remove the crusts before they are ready to come away easily.

Certain large hemangiomata which protrude high above the surface of the skin and whether they be of blood vessel or lymph vessel origin, usually respond well if they are first treated with radium filtered with .1 mm. aluminum. If the hemangioma extends deeply into the skin, a thick cork or wood filter should be placed between the radium and the lesion. It is much better to treat these disfigurements a large number of times rather than trying to accomplish too much at one sitting.

In any of the cases where small telangiectatic blood vessels remain in the scar tissue, it is well to touch these at their heavier end with the electric cautery so that they may be eliminated entirely from the picture.

In a few selected cases electrolysis may be employed by inserting the electrolysis needle into the lumen of the blood vessel, allowing it to remain for several seconds which usually cause the collapse of the vessel and healing of the nevus.

The only type of nevus that causes great concern to the experienced dermatologist is the melanoma. This lesion is extremely malignant and should be removed widely and *x*-rays should be given to the base before closure of the wound. If the melanoma measures 1 cm. in diameter, an elliptical incision should be made by the electrocautery knife, avoiding the edges of the melanoma by at least 0.5 cm., and the entire skin and subdermal tissue should be removed in one piece before *x*-ray is given. The wound can then be closed. In a large number of these cases seen by the author there has been no recurrence for a period of over five years.

There is no reason why birth marks in any location or of any type cannot be removed satisfactorily if they are entrusted to one who has had experience in their removal. The feeling that dire results may be suffered is groundless and there is no reason to fear any mental or psychologic change as a result of their removal. Since this is a field in which the patient suffers great mental agony in carrying with him through life many of the disfigurements which have been suffered in the past, I feel that removal of birth marks and proper advice to patients suffering from them is a very important medical problem.

The American Trudeau Society, medical section of the National Tuberculosis Association, has approved the administration of BCG vaccine to nurses, physicans and hospital attendants, who have negative tuberculin tests, because these individuals are almost constantly exposed to tuberculous infection from known and unknown tuberculous patients. It also approves BCG for (1) the Indians, (2) inmates and attendants in institutions for mental patients, and (3) in slum areas in certain large cities where proper housing and living conditions have not as yet been achieved. For the same reason it is justified as a temporary expedient in some countries where the tuberculosis death rate is high and facilities for isolation and treatment almost non-existent. The approval of the Trudeau Society for the use of BCG under these conditions was given with the full knowledge that only slight protection would be achieved and in no sense as a substitute for an adequate program of case finding, isolation, and treatment. The NTA Bull., David T. Smith, M.D., March, 1951.

Polyps of the Large Bowel and Their Management

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In a review of the subject of polyps of the large intestine it is found that the literature is confusing. The word polypus is derived from the Greek and means many footed. The polyp of zoology is an animal with many feet; the octopus is a typical polyp.

The pathological lesions which we call polyps have taken their name in all probability from their resemblance in conformation to the octopus. The use of this term which has the implication of form alone has led to the inclusion of innumerable pathological conditions under the heading of polyp.

The mucous membrane of the large intestine is a velvety, vascular tissue and normally disposed in polymorphous folds and crypts. Localized hypertrophy, hyperplasia or redundancy may give rise to polypoid formation.

In patients who have no history of previous bowel disturbance a careful examination proctologically and roentgenologically, will reveal the astonishing fact that more than ten percent of patients past middle life have polyps in their large intestine. In most of these patients the polyps are small in number and surrounded by apparently normal mucous membrane. They may vary in size from those barely distinguishable to others which may offer obstructive symptoms by their obturation of the bowel lumen.

For purposes of study a classification of polyps may be based upon the etiological, pathological and clinical features which predominate in a given case. A frequently met type is the inflammatory polyp. Simple, single or even multiple polyps in localized areas are not uncommon following any chronic inflammatory lesion involving the mucous membrane. Polypoid lesions are common around the internal openings of fistulas of the large intestine and a case has been reported by Dixon in which polyps of the colon developed following bilateral ureterosigmoidostomy. It has been noted also that when inflammatory activity ceases or the cause is removed the polyps tend to atrophy or even disappear from the former polyp bearing areas. Multiple polyps are prone to follow in the wake of ulcerative colitis. It is interesting to record that malignant degeneration of polyps engrafted upon the chronic lesions of ulcerating colitis is not uncommon. Chronic inflammatory lesions may develop polyps which may have a very wide distribution. The term polyposis has been used rather loosely and is applied to a group of pathological entities whose principal characteristic is the occurrence of multiple polyps in the intestinal tract.

Lockhart-Mummery described a condition which he termed multiple adenomatosis. This condition is characterized by polypoid masses which spring from the mucous membrane with diffuse hyperplasia and widespread lymphatic infiltration. The diffuse or solitary lymph follicles are usually enlarged and hyperplastic. This particular type of polyposis shows a rather striking tendency to be hereditary and to undergo malignant change in a large number of its victims. In most of these patients the polyps are discrete and while they may vary greatly in size, shape and number, they are usually separated by areas of normal mucous membrane.

Less commonly a type of polyposis may occur in which the polyps tend to be multiple and the mucous membrane between them show pathologic changes of various types and degrees. The entire intestinal wall may be involved to a greater or lesser degree. Handley has suggested that in certain of these polypoid lesions the pathogenesis has its inception in the lymphatics of the submucosa. This concept is a valid basis for the suggestion that surgical or electrosurgical removal of polyps should include as much of the base as can be safely accomplished without danger of penetrating the entire bowel wall.

The symptoms of polyps in the intestinal tract are as varied as their causes. Many are asymptomatic and are discovered only on routine examination with the proctoscope or the x-ray. Even

careful x-ray study may not reveal the presence of single or multiple polyps unless the examiner makes use of the double contrast method. How long polyps can exist without giving rise to symptoms is, of course, impossible to state with any accuracy. That they may be present for years without the patient suffering any particular discomfort or ill effects is well established.

Bleeding is a rather common occurrence where the polyps are numerous or where they have reached a considerable size and are eroded as a result of their obstructive tendencies. The vascular polyps engrafted as they commonly are on inflammatory bases may give rise to repeated and sometimes profuse bleeding. The large polyps with pedicles may be so irritating by their presence that they cause excessive peristalsis. This in itself tends to elongate the pedicle of the polyp and in some instances, by traction on the bowel wall, may cause intussusception. One such patient in our service gave a history of repeated attacks of partial obstruction. When he came to surgery after several days of colic a complete obstruction was present. Exploration revealed a polyp at the apex of an intussusception which caused invagination of the cecum and several inches of the ascending colon. An insidious progressive anemia may be the first symptom of bleeding polyps. The patient may sometimes be unaware of the slow leakage of blood from the bowel. When the polypi are located beyond the transverse colon the patient is more apt to report the presence of frank blood in his stool. If the polyps are above the rectal area, the blood may be intimately mixed with the stool but when the polyps are in the rectum or pelvic sigmoid the stool may be coated with streaks of bright red blood.

Bowel irritability and hyperperistalsis is not uncommon. Patients with polyps may give a history of repeated attacks of intestinal cramps and diarrhea. Many of these patients are treated for colitis or spastic bowel. The passage of considerable quantities of mucous is not uncommon. In polyposis, the attacks of diarrhea are frequently accompanied by the passage of mucous, or mucous and blood. These patients are practically always sufferers from irregular bowel habit associated with more or less vague abdominal discomfort. Occasionally the attacks are so violent and the exacerbations of colic so acute that the diagnosis may be made of an emergency surgical abdomen.

The management of polyps is as diverse and lacking in uniformity as are the lesions themselves. It would serve us better to discuss the management of a classical example of the most common variety. In and about fistulous tracts and other localized inflammatory lesions we have indicated the necessity of first removing the causative lesions if possible. If the polyp does not disappear spontaneously it may be necessary to destroy it as we would other polyps not engrafted upon an inflammatory base. The most common problem met by the proctologist is the management of the isolated polyp discovered during the course of routine proctologic examination or found in the course of a barium enema study.

If the patient is a young person, the lesion is less likely to be a malignant one. However, if the patient is in the cancer age, it is exceedingly important to establish the character of the polyp. The single pedunculated polyp can be snared off and its base cauterized with little fear of accidental perforation or penetration of the bowel wall.

If the polyp is of large size or has a broad pedicle it is more difficult of management and is more likely to be malignant. There is the danger that in making traction on any polyp one may tent the bowel wall from which the polyp springs. During the act of snaring it off and cauterizing the base, a frank perforation may result. This is particularly true when one is dealing with a polyp which springs from the bowel at a level higher than the pelvic peritoneal reflection.

In the rectum proper the cauterization of large polyps may be followed by abscesses in the hollow of the sacrum. Less frequently fistulous communications are established with the vagina or bladder. When the polyps are above the level which can be reached safely with the sigmoidoscope a laparotomy may be necessary to permit excision of the polyp or sleeve resection of the polyp-bearing area.

Where the polyp is of large size, and particularly in patients past middle life, it is probably a safer procedure to do a sleeve resection, since a local excision may offer almost as much diffi-

culty and yet may leave tissue which is of doubtful malignant tendency.

When polyps are discovered in ulcerative colitis we do not believe that these can be treated by excision. If the ulcerative colitis has not been controlled it is safer to establish a permanent ileostomy and at a later date do a stage colectomy. This should include the rectum if it is involved.

In familial polyposis there is an inordinate tendency of the polyps to undergo malignant change. Some of these patients develop malignancy at a very early age. Occasionally a history of polyps in a parent may lead to the discovery of polyps early in the life of an offspring.

In these patients it may seem extremely radical to recommend so desperate a procedure as complete resection of the involved region or complete colectomy. However, in the light of our experience and that of others in this field it seems entirely justified.

There is an occasional case of familial polyposis in which the polyps may be confined to a single segment of the colon. In such instances it may be sufficient to do a sleeve resection of this involved segment. The remainder of the colon should be carefully palpated during the operation to be certain that no polyps remain elsewhere in the bowel.

Preoperative preparation. Whenever one contemplates any surgical procedure on the large bowel, whether it be the snaring of a single polyp with cauterization of the base, colostomy or colectomy, the patient and the bowel should each receive careful preoperative attention.

The patient is very likely to be anemic from occult or gross bleeding and may need multiple transfusions to restore his blood to a safe level. Hypoproteinemia is exceedingly common in surgical disease of the large bowel. The vitamin levels are prone to be disturbed by the restricted diets indulged in and by the loss of these from the body. Vitamin C particularly should be raised to a nearly normal level if one is to expect efficient tissue repair and wound healing. Reduction of the bacterial flora of the bowel can be accomplished by the administration of antibiotics.

Chemical and water balance of the body should be brought to as near normal as possible and the efficacy of the liver improved by diet and administration of glucose and amino acids.

Mechanical cleansing can be thoroughly accomplished by enemas and irrigations.

Summary. Polyps are common lesions of the large bowel and are present in more than ten percent of all individuals over fifty years of age. In dealing with a polyp or polyps one must make a searching study before one decides on the type of treatment to be instituted.

No surgical procedure should be attempted unless one has used every means at his disposal to establish the character and extent of the disease which he attempts to treat. Surgical procedures should not be instituted until the patient and the bowel have had adequate preoperative preparation.

We emphasize that 60,000,000 to 80,000,000 Americans, for one reason or another, annually consult physicians, and it has been demonstrated that the tuberculosis rate among these groups is higher than among the general population. For this reason, it is highly desirable that private physicians, including general practitioners, internists and specialists, obtain a chest X-ray film of every patient who consults them unless the results of a recent chest X-ray survey are available. New England J. Med., Robert B. Kerr, Frank G. Seldon, John D. Spring, November 30, 1950.

Prior to 1940 the tuberculin test was commonly used in case-finding surveys. Such surveys, however, yielded on the average only 2 cases of active tuberculosis for every 100 positive reactors to tuberculin. This low yield has brought the tuberculin test into disrepute for use in primary surveys, but does not in the least minimize the importance of testing with tuberculin those persons whose roentgenograms show suspicious shadows. Am. Rev. Tuberc., C. Eugene Woodruff and W. Leonard Howard, February, 1951.

ACTH and the Kidney

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Dr. Farnsworth: Despite widespread investigations into many aspects of ACTH and adrenal steroids over the past three years, their effects on the kidney are far from being understood. Relationship can be considered in two main categories, namely, their action (1) on the healthy kidney, and (2) on the diseased kidney. In the healthy kidney, ACTH apparently acts primarily on the tubules. A direct effect on glomerular filtration appears to be absent, but secondary changes are seen which are due to hydrodynamics of altered body water. The known changes may be summarized briefly as follows: phosphates and uric acid are excreted in increasing quantities, and there is often a sudden outpouring of potassium during a course of ACTH; on the other hand, there is a marked increase in the reabsorption of sodium and of water. Increase in excretion of nitrogenous products — indicated by an increased output of uric nitrogen — reflects, of course, in part, the increased protein metabolism caused by the hormone. Consequently, in a few patients we studied the ratio of urine to serum concentration of creatinine and of certain electrolytes. Taking the U/P ratio of endogenous creatinine as an index to water reabsorbed in the renal tubules, and relating the value thus obtained to the U/P sodium ratio, it was found that the reabsorption of sodium was markedly accelerated during the first four hours after the administration of 25 mg. of ACTH. Reabsorption of water was also increased, but to a significantly lesser extent.

In the impaired kidney, we have been interested in the effect of ACTH on its various diseases, particularly diffuse glomerulonephritis, acute or subacute, and in the nephrotic syndrome. We feel that the cases of subacute nephritis are more practical for a scientific study because the course of the acute illness is usually brief and self-limited; thus a large series with adequate controls would be necessary to make a valid evaluation in acute diffuse glomerulonephritis. It has been our impression — on the basis of studies in acute and subacute forms of this disease — that marked inflammatory changes have been repeatedly controlled by the hormone. There may be a transient rise in blood pressure, but this usually will not last. Changes in the degree of hematuria are often striking. We have seen improvement in clinical condition and control of azotemia. Other investigators, particularly Dr. George Thorn, have not seen as dramatic a change in this condition as demonstrated in our patients. I believe that much further investigation is necessary before the advisability of this agent in the routine management of the acute nephritic condition be stated.

Results of ACTH on the nephrotic syndrome in children have been more substantially documented. We recently reported fourteen cases with prolonged observation. There have been complete remissions in two, and partial remissions in the remainder. The older age groups do not appear to do as well as the younger children. Proteinuria is often accentuated during the first few days, then diminishes, either during or following a course of ACTH. Diuresis is very marked in many cases (Figure 1) and we have seen profound reduction in serum cholesterol, as well as in phospholipids and neutral fats. Neutral fats, or triglycerides, seem to be the most sensitive of the lipid fractions. If a given course of ACTH does not induce a diuretic response repeated courses with increased dosages often will do it. The anabolic protein phase is often very difficult to get started, but the results are gratifying when serum proteins begin increasing. It is still not obvious as to how much

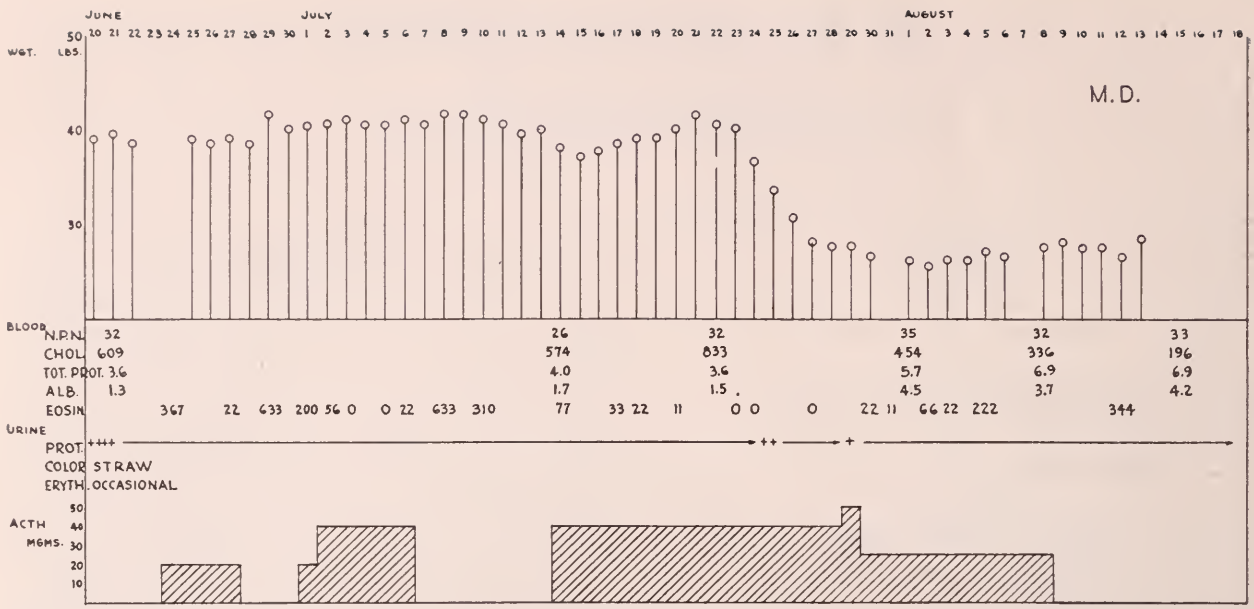


Figure 1. Clinical course of a three-year old child ill with a nephrotic syndrome during administration of ACTH.

improvement can be expected with repeated courses of ACTH in these cases. Early in the course of treating a case it is very disconcerting to see the increasing weight and blood pressure and one is often tempted to discontinue the drug before a good diuretic response has been initiated. Azotemia without fluid retention is almost a contraindication for using this agent inasmuch as the damaged kidney is able to excrete only so much nitrogenous waste despite adrenocortical stimulation.

In summary, ACTH affects the tubular excretion and reabsorption of several metabolic products in fairly consistent directions. The changes vary from person to person, however, and in the same person at different times. In acute or subacute diffuse glomerulonephritis, the corticoids released by ACTH often profoundly reduce the inflammatory reaction. In the nephrotic syndrome, particularly in children, ACTH sometime during the course of repeated administrations or following withdrawal will give rise to a marked diuretic response with clinical improvement. The duration of complete remissions, as well as the further treatment of partial remissions, are the problems which future experience may be hoped to solve.

Dr. Ford K. Hick, Professor of Medicine: How does Cortisone compare with ACTH in these conditions?

Dr. Farnsworth: Some good results have been reported from the use of Cortisone, but our experience is insufficient yet to completely evaluate the comparative value of the two agents.

Dr. J. A. Schoenberger, Instructor in Medicine: Have you seen glycosuria develop in these patients?

Dr. Farnsworth: Yes, we have seen it in some cases. Although we have not tested glucose threshhold and the tubular mass to glucose, we have seen glycosuria with relatively low blood sugar.

CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Pernicious Anemia Associated with Lymphosarcoma

Steven O. Schwartz, M.D. and Fern L. Stevenson, M.D.*

Chicago

Very few reports of the coexistence of pernicious anemia and leukemia or lymphosarcoma have been recorded. These are summarized in Table 1. The description of an additional case may, therefore, be of interest.

A 78 year-old white woman was admitted to the Cook County Hospital in September 1950, complaining of swelling of the ankles of four years duration. She had been hospitalized in 1930 for an appendectomy and in 1946 for a broken hip.

Examination revealed an old, poorly-nourished patient sitting up in bed because of moderate dyspnea. The blood pressure was 155/70. The tongue was pale with atrophy of the papillae. There were bilateral cataracts. Crepitant rales were heard in the lung bases. A systolic murmur was audible over the apex of the heart. The liver was palpable three cm. below the right costal margin. The spleen was not demonstrably enlarged. The supraclavicular lymph nodes were enlarged to twice, and the inguinal and axillary nodes to approximately three times normal size. There was moderate edema of the legs and over the sacrum.

Laboratory examination included the following: gastric analysis which revealed no free acid after histamine administration; urinalysis showed + albumin but was otherwise negative; Wasserman and Kahn tests were negative; NPN 32 mg.%, total protein 5.9, albumin 3.6, globulin 2.3 gm.%, phosphorus 3.5, total cholesterol 138, alkaline phosphatase 1.5 units, icterus index 16 units, thymol turbidity 1.6, cephalin flocculation 0, gamma globulin 0.74. Peripheral blood findings are shown in Table 2.

The heart was found to be greatly enlarged in its transverse diameter, with prominence of the left ventricular segment on the *x*-ray film of the chest taken shortly after admission. The aortic shadow was widened, and there was calcification within the aortic knob. Lung fields were within normal limits.

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From the Hematology Laboratory and the Hektoen Institute for Medical Research of the Cook County Hospital, Chicago.

Aided by a grant from the Wilson Laboratory, Chicago.

TABLE 1

Summary of Acceptable Cases of Pernicious Anemia Coexisting with Leukemias or Lymphomas.

Author	Year	Leukemia or Lymphoma
Rich and Schiff[2]	1936	Chronic lymphatic leukemia
Touw and Graffland[4]	1939	Aleukemic lymphatic leukemia
Sterne, Schiro and Molle[3]	1941	Subacute myelogenous leukemia
Wooley[5]	1944	Chronic myelogenous leukemia
Mason and Schwartz[1]	1949	Chronic lymphatic leukemia

A biopsy was performed on a lymph node from the left supraclavicular region. Microscopic examination (Dr. A. Ragens) revealed a complete loss of architecture with replacement by numerous lymphoid cells. Scattered throughout, in addition to these lymphoid cells, were large mononuclear cells with reticulated cytoplasm. The capsule of the lymph node was infiltrated by numerous lymphoid cells similar to those found in the node proper. The diagnosis was lymphocytic lymphosarcoma.

An aspiration biopsy of the sternal marrow revealed it to be hypercellular. The nucleated red to white cell ratio was 1:2. Erythropoiesis was megaloblastic with a slight left shift. Granulopoiesis was slightly toxic and characterized by the presence of giant myelocytes, metamyelocytes, and band cells. Lymphocytes were markedly increased in number and many of them contained bilobed nuclei. The marrow findings were considered to be diagnostic of pernicious anemia and malignant lymphoma.

The patient was given liver extract in small doses daily from 9/26/50 to 10/10/50 with a reticulocyte response of 34.8 per cent on the seventh day. Subsequently, maintenance doses of liver were administered.

Comment: The diagnosis of pernicious anemia is substantiated by the megaloblastic marrow, the absence of free gastric HCl after stimulation with histamine, the reticulocyte response of 34.8 percent after seven days of liver therapy,

TABLE 2

Summary of Peripheral Blood Findings

Date	Hemoglobin Gms.	%	RBC	WBC	Retic	Polys	Band	Meta	Myel	Eosin	Baso	Lymp	Mono	NRBC	Remarks
9/25/50	6.0	39	2.08	24,500		21						75	4		
9/26/50	6.0	39	2.08	24,500	1.6	21						75	4	3	An +++ Macro + Poly + Stippled RBC
9/27/50	5.9	38—	1.70	48,900	1.4	11	1	1		1		85	1	2	
9/28/50					5.2										
9/29/50					6.8	12						85	3	4	
9/30/50	7.8	50	2.05	81,000	11.0	16		1	1			79	3	12	
10/1/50					14.4										
10/2/50					34.8										
10/3/50	6.8	44	1.91	36,550	32.6	22						71	7		
10/4/50					25.8										
10/5/50					14.8										
10/6/50	7.8	50	2.25	26,750	11.8	34						63	3		An ++ Pk + Poly +
10/10/50	9.8	63	2.82	24,200	10.0	29						65	6		An ++ Mac + Poly +
10/19/50	11.4	73	3.47	9,150		59				1	1	35	4		
11/3/50	14.5	93	4.98	5,650		54	10			8		21	7		

and the excellent clinical and hematologic (return to normal values of RBC and hemoglobin) response to liver therapy alone.

The diagnosis of lymphosarcoma was suspected from the physical findings, confirmed by the leukocytosis and lymphocytosis, substantiated by the marrow findings, and proved by the biopsy of the lymph node.

It is interesting to note that both the peripheral lymphocytosis and leukocytosis have disappeared for the time being, without specific therapy directed to the lymphosarcoma.

SUMMARY

A case of pernicious anemia associated with lymphosarcoma is presented. Only five other cases of pernicious anemia associated with leukemia or lymphoma have been reported.

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THE MAYO BROTHERS

In their last ten years together there was an unfailing routine when they both were in town. Dr. Charlie would come in eagerly every day, "Is Will here?" Dr. Will entering the corridor would call out, "Have you seen Charlie today?" and immediately go in search of him. One day, in their last year, when they were about to leave town on different occasions they met in the older brother's office, and stood for a moment, each with his hands on the other's shoulders. "Well, Charlie." "Well, Will." And, almost together, "We've had a good time." Whenever they parted even for a few days, in that year, they felt that it might be a last good-bye.

When Dr. Charlie died and Dr. Will soon followed, the world paid them tribute. With their passing an epoch ended. Together they had added much to the sum total of human knowledge and contributed greatly to the improvement of human welfare. *Excerpt: History of Medicine in Minnesota, Nora H. Guthrey, Rochester, Minnesota. Minn. Med., February* 1951.

CASE REPORTS



Torsion of the Gall Bladder

William J. Vynalek, M. D., F.A.C.S. and Frank P. Paloucek, M.D.
Berwyn

Torsion of the gall bladder is an exceedingly rare condition, there being approximately 100 cases in world literature since Wendel reported the first case in 1898. Most of these are in foreign publications. Torsion can occur only when the gall bladder hangs free in the peritoneal cavity with little or no attached mesentery. It is most common in elderly women. Symptoms and findings are not diagnostic. Usually a diagnosis of gall-bladder pathology or appendicitis is made. Only surgery will save the patient. With the abdomen open, cholecystectomy is usually a simple procedure because of the long, narrow pedicle.

The patient was a 74 year old white female admitted to the MacNeal Memorial Hospital, Berwyn, Ill., at 6:35 PM on March 20th, 1950.

Past history was negative except for an obstetrical history of five children. She had apparently been well until the night before admission when she was seized with a diffuse, severe epigastric pain associated with marked nausea and vomiting. The pain eventually became localized to the right lower quadrant and particularly over McBurney's point. Except for this the patient had no other symptoms.

Physical examination revealed a frail, elderly woman appearing acutely ill and slightly dyspneic. Her pulse was 104, respirations 26, temperature 99.4 F., and blood pressure 196/90. Her weight was 106. The head, neck, chest and extremities revealed no abnormal physical findings. The abdomen was not distended, but there was marked tenderness and rigidity over the entire right abdomen, the point of maximum tenderness being slightly above McBurney's point. Moderate rebound tenderness was present, but no masses were palpable. Bowel sounds were diminished. Pelvic examination was negative except for a cystocele, and rectal examination revealed only moderate right sided tenderness.

Laboratory work yielded a negative Kahn, a 5,000,000 red blood cell count, 15,500 white blood

From the Department of Surgery, MacNeal Memorial Hospital, Berwyn, Illinois, and Stritch School of Medicine, Loyola University, Chicago, Illinois.

cells with 86% polymorphonuclear leukocytes and 14% lymphocytes. The hemoglobin was 15.2 grams.

The patient was given 300,000 units of penicillin, ¼ gram of streptomycin, 1/32 grain of dilaudid, and 1/150 grain of atropine and taken to surgery 1½ hours after admission with a diagnosis of an acute appendicitis.

Under cyclopropane anesthesia, later supplemented with curare, the abdomen was opened with a right rectus incision opposite the umbilicus. The lower abdomen including the appendix was normal. On exploration of the upper abdomen, a large tense, fluid-filled mass was palpated in the region of the gall bladder. The incision was then extended upward. The gall bladder appeared; it was markedly distended, and tense with fluid and of a black color. A trochar was inserted and 80 to 90 cc. of a blue black fluid was aspirated. The gall bladder was then easily followed to its base and found to be but slightly attached to the liver bed at its neck. About 2 cm. from its junction with the common duct, there was a half twist (180 degree) of the cystic duct. The discoloration proceeded upward from this torsion. The cystic duct and artery were easily isolated and doubly ligated. The gall bladder was then lifted free and removed.

The pathologist's report revealed an acute hemorrhagic infarction of the gall bladder with almost complete necrosis of the gall bladder wall. Four pile pigment calculi measuring 2 to 3 mm. in diameter were also found.

With the exception of a slight wound infection, the patient made an uneventful recovery and was discharged on her 15th post-operative day.

CROCODILE TEARS

The notion that the crocodile, a harmful reptile, will weep over a man's head after he has devoured the body and then will eat up the head too was the theme of one of the many "scientific" anecdotes of Pliny the Elder. It was popularized in the fourteenth century by the "Travels of Sir John Mandeville." This gentleman-explorer existed only in the imagination of Jean de Bourgogne, a French physician, who himself never left his country and who, charmingly enough, confessed that had these fantastic tales he relates been told him, he would not have believed them (Legouis, E.: A History of English Literature: The Middle Ages and the Renascence, vol. 1, London, J. M. Dent & Sons, Ltd., 1948). *Excerpt: The Syndrome of Crocodile Tears, Jerzy Chorobski, M.D. Warsaw, Poland, A.M.A. Archives of N. & P.*

The doctor roused sleepily when the telephone jangled at 3 a.m. He heard an anxious voice. "Doc, this is Leon Smith, I wish you'd come out to my place right away. I know it's a long drive but I'm afraid my wife has appendicitis."

"Relax, man," the doctor said soothingly. "You know I took out your wife's appendix four years ago. Did you ever hear of anyone having a second appendix?"

"Get a move on, Doc. Ever hear of anybody having a second wife?"

Mr. Biggs liked to know all about the employees who toiled in his vast business. One day he came upon a new young man who was dexterously counting out a large wad of the firm's cash.

"Where did you get your financial training, young man?" he asked.

"Yale," the young man answered.

Mr. Biggs was a staunch advocate of higher learning.

"Good," he said, "And what's your name?"

"Yackson," was the reply.

PATHOLOGY CONFERENCES

EDWIN F. HIRSCH, DEPARTMENT EDITOR



Presentation of Three Cases

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Chicago State Hospital
Chicago

CARCINOMA OF THE MAMMARY GLAND; DEATH FROM METASTASES 22 YEARS AFTER RADICAL MASTECTOMY

A white woman, born in 1894, had a right radical mastectomy for carcinoma in 1927 or 1928. The exact date of this operation could not be verified. In August 1929 she was admitted to the Augustana Hospital in Chicago. The record received from there states that in January 1929 a node from the right axilla had been removed and was found to have metastatic carcinoma and that another similar node was removed in June 1929. When examined in August 1929 the upper end of the mastectomy scar had a hard poorly defined mass. The right axillary tissues were excised and a course of roentgen x-ray treatments was given. The diagnosis at this time was carcinoma of the right breast, recurrent carcinoma in the right axilla.

About 10 years later the patient became mentally ill. She was treated in several hospitals and in 1943 was committed to Chicago State Hospital. She stayed there until her death in 1950. The psychiatric diagnosis was paranoid schizophrenia.

Physical examination at the time of admission in 1943 revealed the mastectomy scar and also a marked edema of the right arm. There was no evidence of recurrent or metastatic growths. No enlarged lymph nodes were found in 1944 and in 1945, when the patient was in the hospital for intercurrent irrelevant ailments. In September 1948, about 20 years after the first operation, a mass of hard nodes was found in the left axilla. The left breast had no evidence of tumor. On Sept. 13, 1948 these enlarged lymph nodes were removed. They were below the pectoralis major muscle and extended along the vein into the left axilla. The tissues removed contained several lymph nodes, the largest 1 inch in diam. The nodes were hard and surfaces made by cutting were gray. The nodes were imbedded in fat and fairly well separated from each other. Microscopial examination demonstrated small heaps and strands of meta-

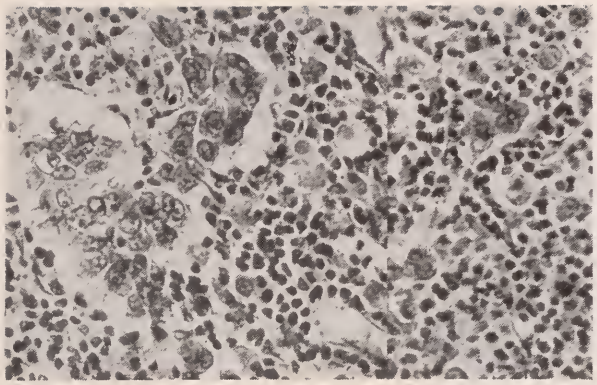


Figure 1. Axillary lymph nodes, removed 1948. Photomicrograph. Occasionally small masses of carcinomia cells are in the sinuses; however mostly the tumor cells are dispersed singly or in groups of two or three.

static carcinoma. The large tumor cells spread diffusely in the lymph sinuses (Figure 1).

A careful physical examination of the patient was done, including a gastrointestinal series and a complete Roentgen ray survey of the skeleton. No primary tumor was found. Finally, a plaquelike mass was palpated in the left breast, and this mammary gland was amputated on November 1, 1948. Examination of the gland tissues failed to disclose carcinoma.

The patient recovered from this operation and stayed in the general ward until July 1950 when she developed ascites. She became emaciated, rapidly grew worse, and died on August 21, 1950, 22 or 23 years after the first operation for carcinoma of the breast.

The autopsy demonstrated the two mastectomy scars without tumor nodules. No enlarged lymph nodes were in the axillæ. The abdominal cavity contained about four liters of a yellow, slightly turbid fluid. The mesentery and the omentum were firm, grey, and were invaded by metastatic carcinoma. The peritoneum of the small pelvis, of the diaphragm and of the intestines had numerous small hard grey nodes and streaks.

The pleural spaces had no fluid. Some enlarged, hard lymph nodes were in the anterior mediastinum. Otherwise there were no relevant findings in the chest. Careful examination of the lungs for a bronchial carcinoma was negative. Neither was a primary tumor found in the stomach and the intestines. The liver, the gall bladder, the spleen, the pancreas, the suprarenal glands and the kidneys had no tumor nodules. The ovaries were small and normal in appearance. The same was true for the uterus and the urinary bladder. The brain weighed 1100 gms and seemed to be normal.

Microscopical examination revealed a diffuse invasion by carcinoma cells which had spread in the lymphatics and had little tendency to form large nodes or masses. The cells were large and had large hyperchromatic nuclei. They were identical with the cells found in the axillary lymphnodes removed in 1948.

In the abdominal cavity was a diffuse invasion of the peritoneum. The lymph spaces were filled with tumor cells, also the sinuses of the lymph nodes (Figure 2). Solid nodes were in the intestinal serosa. The diaphragm was covered by a thin layer of carinoma cells. The lymph vessels of Glissons capsul were filled with tumor cells (Figure 3) : the liver parenchyma was spared. The brain had a diffuse carcinoma invasion of the leptomeninges (leptomeningitis carcinomatosa). The subarachnoidal spaces were filled with tumor cells, which seldom formed tiny nodes, but mostly were singly or in small groups in the tissue (Figure 4). The brain and the Virchow-Robin spaces were not invaded.

COMMENT

It is well known that the five years period does not mean complete eradication of a breast cancer and that recurrences and metastases may appear much later. The case reported here illustrates

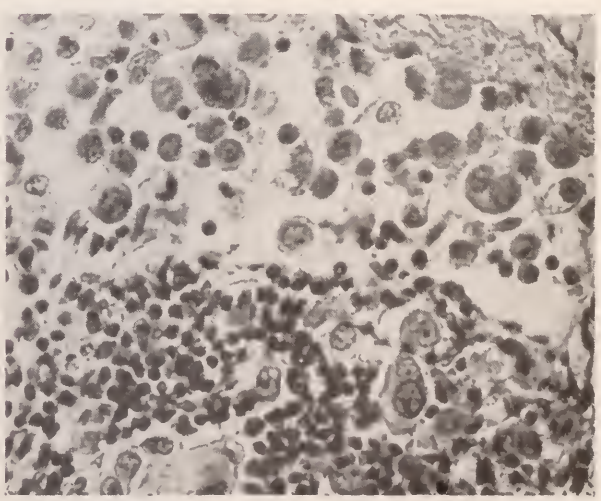


Figure 2. Abdominal lymph node, removed at autopsy. Photomicrograph. The marginal sinus is filled by single carcinoma cells.

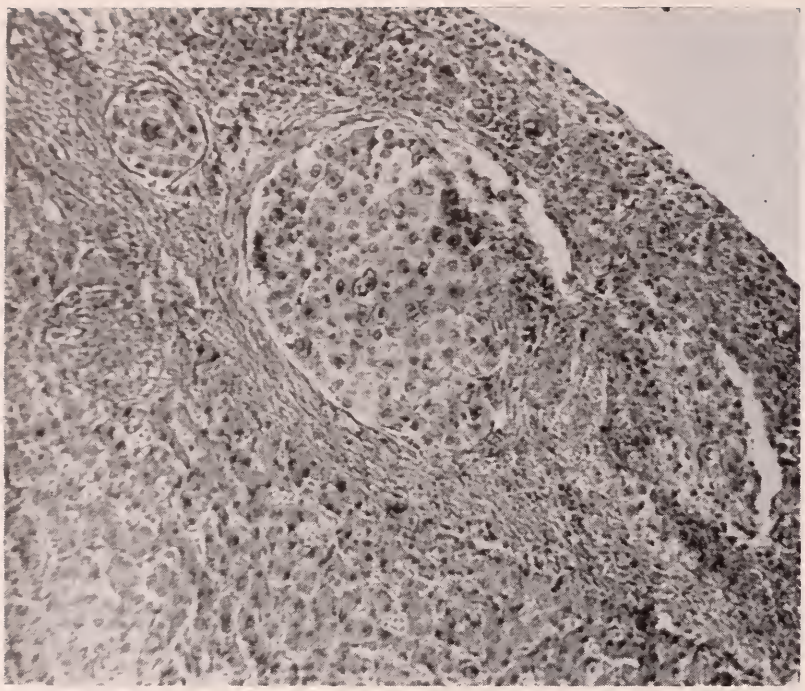


Figure 3. Liver, with Glissons capsule. Photomicrograph. Lymph spaces are filled with tumor. The liver parenchyma (left lower corner) is not invaded.

this fact. It proves that late metastases may appear in locations where least expected and where they must have been present for many years without causing clinical symptoms.

Some conclusions are permitted from the morphological structure of this specific tumor as to its biological potentialities. The tumor cells were mainly in the lymphatics and apparently seemed unable to form large metastatic nodes. This was evident in the lymph nodes removed in 1948. Accordingly the infiltrating power of the tumor cells is rather limited: they propagate in the lymph but are not sufficiently invasive to break through the wall of the lymph vessels. Consequently infiltration of the peritoneum occurred without the formation of a single node in the liver, and carcinoma invaded the leptomeninges without extension into the brain. This apparently low degree of invasiveness may explain the long survival of this patient.

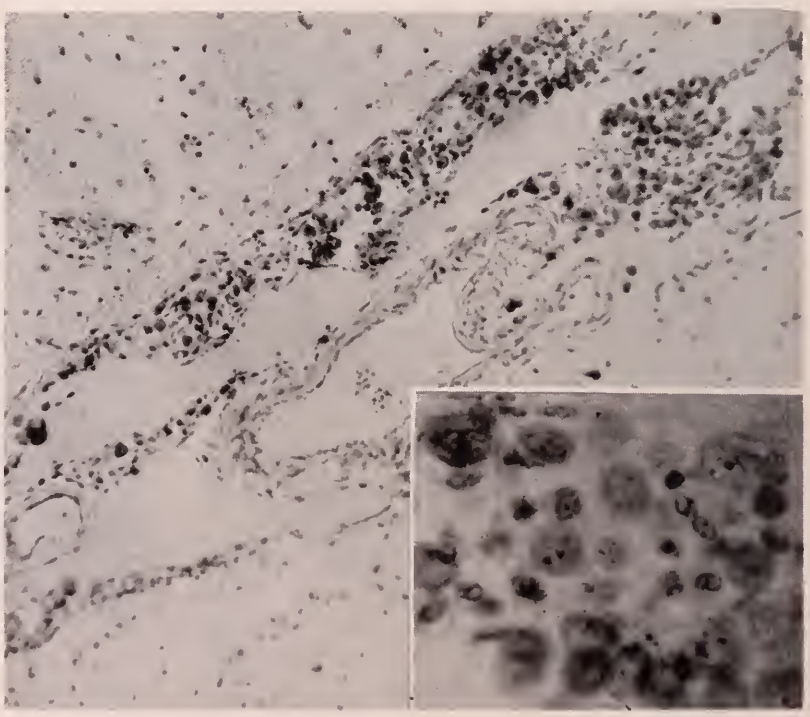


Figure 4. Brain. Carcinomatosis of the leptomeninges. Photomicrograph. The subarachnoidal space is filled with tumor cells. Inset shows the tumor cells at high power magnification.

BENIGN SOLITARY ADENOMA OF THE LIVER IN A MALE AGED 88 YEARS

This white man was first admitted to the Chicago State Hospital in 1927, at the age of 65 years. Then he was diagnosed as a chronic alcoholic with mental deterioration. He remained in the hospital until 1946. During the years of his hospitalization he had no significant physical ailments.

In 1948 he was readmitted with symptoms of advanced senile dementia. Physical examination revealed moderate cardiac decompensation and a chronic bronchitis. The patient remained in the hospital for two years and died in 1950 at the age of 88 years.

The body of this old man was in poor nutrition. The heart had coronary sclerosis and an aneurism of the left ventricle. There was a clear fluid in both pleural cavities. The lower lobe of the right lung had regions of broncho pneumonia. The spleen was moderately hyperemic.

The liver weighed 2200 gm. The large left lobe extended to the navel. The surface was smooth and glistening. A large encapsulated tumor in the left lobe, 12 by 9 by 9 cm., was surrounded by brown liver parenchyma. The tumor was soft and elastic. Surfaces made by cutting were yellow intermixed with large irregular dark red regions. (Figure 5).

Microscopical examination of the tumor revealed an epithelial growth (Figure 6) composed of medium-sized cuboidal cells in cords. The cells had a small nucleus and considerable acidophilic cytoplasm. These cells resembled closely liver cells. They formed irregular rabecles and cords, separated by a loose fibrous tissue or by sinusoid structures. Neither bile pigment nor bile ducts were found. The tumor had large regions of necrosis.

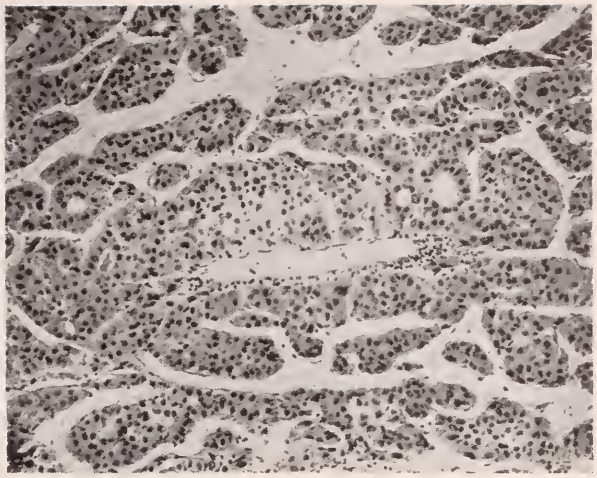


Figure 6. Adenoma of the liver. Photomicrograph. Note the uniformity of the cells and the arrangement in cords and trabecles, separated by sinusoids.

COMMENT:

A diagnosis of a benign adenoma of the liver was made, based upon the location of the tumor, the structure and arrangements of its cells and the fact that it was encapsulated and did not metastasize.



Figure 5. Solitary benign adenoma of the liver.

This is a rare primary liver tumor, rarer than primary carcinoma. Most of the adenomas reported, occurred in children and many of them were small. Contrary to the primary carcinoma of the liver, which often occurs with cirrhosis, the benign adenoma is found usually in a liver with normal parenchyma.

The case reported here seems to be unique as regards the size of the growth and the age of the patient.

Common with other benign adenomas of the liver, this tumor did not cause symptoms. If the clinician would have found the mass upon examination of the abdomen, he might have been misled by its smooth surface and size into considering it an enlarged spleen.

PRIMARY CARCINOMA OF THE LIVER IN AN 85 YEAR OLD WOMAN

A white woman, 85 years old, was admitted to the Chicago State Hospital on August 26, 1950. She had been confused and had disturbed her family for several months. Occasionally she had complained of pains in the abdomen. On admission she was in advanced senile dementia. Physical examination revealed an enlarged heart and a blood pressure of 90/(170) mms. Hg. The patient developed edema of the left leg, gangrene of the toes and expired two weeks after admission.

The body of this old white woman was in good nutrition. There was brown atrophy of the heart muscle and a hypostatic pneumonia. The large liver weighed 2400 gms. The right lobe contained a carcinoma about 15 by 10 by 15 cm. (Figure 7) On the right edge was an indefinite border against brown liver parenchyma. The left edge merged into the left lobe, which was studded with many small tumor nodes separated by a small amount of liver parenchyma. The gall bladder was without tumor and no malignant growth was present in any other structure. Six small hard lymph nodes were along the abdominal aorta.

The right kidney and ureter were missing. As there was neither a surgical scar nor any scar tissue in the retroperitoneal region, nor history of a previous operation, this must be a congenital defect. The urinary bladder had a small pouch, 2 mm deep, at the right upper corner of the trigon. There was a uterus bicornis.

Microscopical examination of the liver tumor revealed carcinoma. The structure, in sections

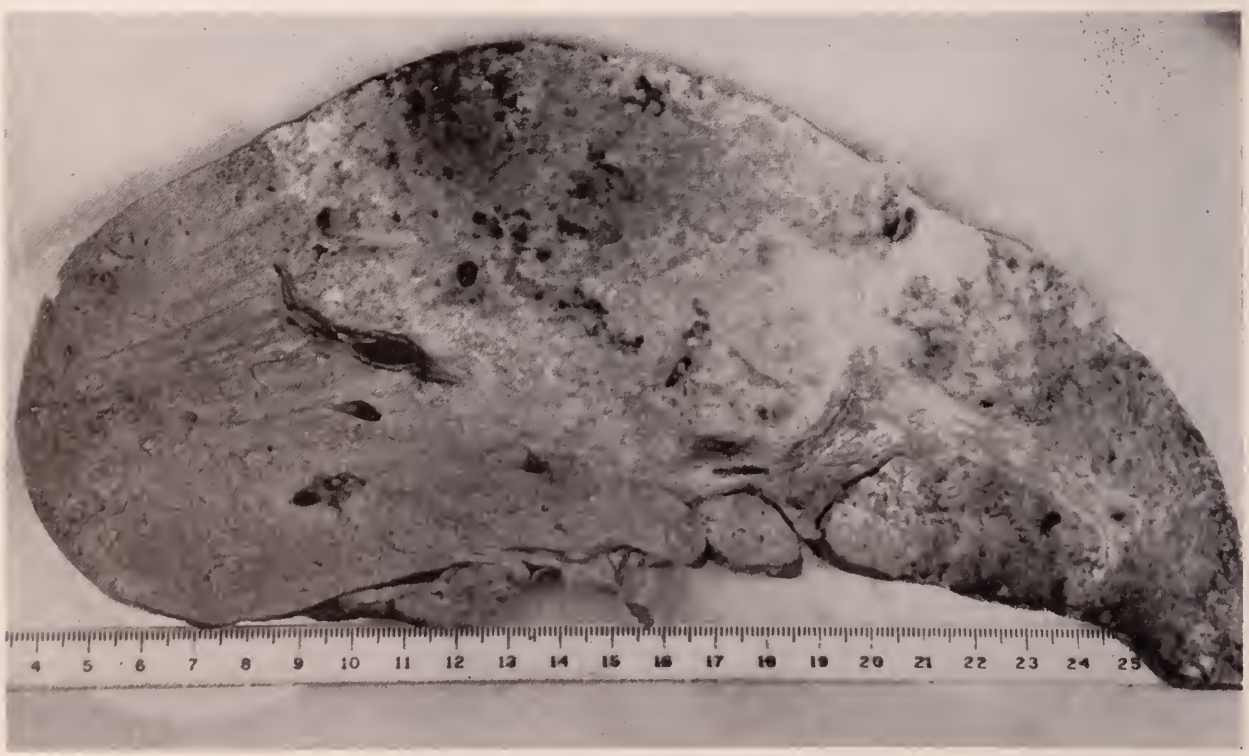


Figure 7. Primary cancer of the liver. There is a massive tumor in the right lobe, with a large portion of grossly intact parenchyma. The left lobe is diffusely invaded.



Figure 8. Primary cancer of the liver. Photomicrograph. Small tumor node (right upper corner) merging imperceptibly into normal liver tissue (left lower corner). Note the many giant cells in the tumor.

from different regions was variegated. The main mass, with large necrotic regions, consigned irregular cords and tubes of epithelial cells in a rather ample stroma. The cells were cuboidal and resembled liver cells, or they were columnar and frequently had a brush border, thus resembling bile duct epithelium. The same variation was in the small nodes in the left lobe of the liver. (Figure 8) Some had a papillary structure with columnar cells covering a fibrous stalk in a single layer. Others were irregular cords of cells, which seemed to merge imperceptibly into normal liver tissue. In such nodes were many giant cells with large irregular nuclei or with multiple nuclei. The liver parenchyma itself had fatty changes of the cells. There was no cirrhosis. The hard lymph nodes along the aorta contained metastases.

COMMENT:

The diagnosis of a primary carcinoma of the liver is based upon the fact, that no other primary growth was found and also upon the peculiar variegated structure of the tumor, which is a characteristic of primary carcinomas of the liver.

Primary carcinoma of the liver is rare. It is even more unusual in a liver without cirrhosis. The old age of this patient (85 years) is remarkable. That the tumor did not cause severe symptoms seems to be explained by the preservation of a large amount of intact liver tissue in the right lobe.

NEWS OF THE STATE



ADAMS

Society News.—Dr. Edwin N. Irons, Chicago, addressed the Adams County Medical Society, in Quincy, March 12, on "The Use and Abuse of ACTH and Cortisone."

Personal.—Dr. Ralph T. Hinton, Quincy, recently celebrated his seventieth birthday.

Staff Election.—Dr. Paul T. Lambertus was recently elected president of St. Mary's Hospital staff. Other officers chosen were Dr. Frank Brenner Jr., vice president; Leroy M. Wolfe, D.D.S., secretary-treasurer; Dr. Gordon Perisho, director of clinical conference; Dr. Frank A. Mayner, director of pathology conference; and Drs. Arthur H. Bitter, Theodore L. Stebbins, Kent W. Barber, Walter Stevenson Jr., executive board.

CHAMPAIGN

Society News.—The Champaign County Medical Society was addressed March 8 by Dr. Robert Dean Woolsey, St. Louis, on "Diagnosis and Treatment of Low Back Pain."

COOK

Personal.—Dr. Harold E. Smith has been reelected chief of staff, Westlake Hospital, Melrose Park. Other officers reelected are Dr. Dwight C. Reeves, vice chief of staff; Dr. Walter Simmonds, secretary; and Dr. Adam Schultz, treasurer.—Dr. Harry M. Hedge has been named associate deputy director for the Evanston medical and public health division of the civil defense organization. He will serve with Dr. Winston H. Tucker, Evanston health commissioner and deputy director.—Dr. Stephan Biezis, senior surgeon at Holy Cross Hospital, has been named physican for the Sanitary District's 1,800 employes, it was announced recently.—Dr. Jerome R. Head was recently appointed to a three-year membership on the Suburban Cook County Tuberculosis Sanitarium District.

Society News.—The Chicago Rheumatism Society was addressed March 28 on "Significance of Giant Follicular Hyperplasia in Lymphadenopathy of Rheumatoid Arthritis" by Drs. A. G. Motulsky, S. L. Weinberg, Otto Saphir and Edward F. Rosenberg. "Bal Therapy of Gold Intoxication: Review of Literature and Report of Two Cases" was presented by Dr. Jerome F. Strauss, Jr., and Dr. Rosenberg.—Dr. Philip Thorek addressed the Western Colorado Spring Clinics, April 1, on "The Practitioner Approaches Esophageal Diseases." The following day Dr. Thorek discussed "The Acute Abdomen" before the Pueblo County Medical Society, Pueblo, Colo.—Dr. Harold Laufman addressed the Milwaukee Academy of Medicine on "The Present Status of the Significance of Intravascular Agglutination", March 20, and conducted a clinic on "Peripheral Vascular Disease", the following day, at the Veterans Administration Center, Wood, Wisc.—On April 1 Dr. Herman L. Kretschmer spoke on "Your Obligation to the American Medical Association" before the resident staff of the John Sealy Hospital of the University of Texas at Galveston. At the annual meeting of the Texas Surgical Society on April 2, Dr. Kretschmer gave a talk on "The Life Span After Prostatectomy". In the evening he was the guest speaker at the banquet and spoke on "Medical Philately".

Branch Meetings.—Dr. L. W. Peterson, president, North Shore Branch, Chicago Medical Society, presided at a meeting of the group, April 3. Dr. Alexander Brunschwig, New. York, discussed "Radical Surgical Treatment of Malignant Diseases" and Dr. Roger A. Harvey, Chicago, "Radical Irradiation Therapy in Malignant Disease with Special Reference to Betatron."

George Hassin Honored.—A testimonial dinner will be held May 24 at the Congress Hotel for Dr. George B. Hassin, emeritus professor of neurology, University of Illinois College of Medicine. The occasion also marks his seventy-eighth birthday. Friends, former students and associates will attend the dinner at which Dr. Louis J. Pollock will be toastmaster. Presentation of a parchment scroll acknowledging his many years of service and contributions in the field of neuropathology will be a feature of the occasion.

Percival Bailey Named Director of Neuropsychiatric Institute.—Dr. Percival Bailey, Chicago, has been named director of the Illinois Neuropsychiatric Institute. He will also continue as research consultant to the Welfare Department.

Award to Simon Zivin.—Included among eight physicians who received national fellowships is Dr. Simon Zivin, according to the Chicago Tribune. The fellowships are awarded by the Arthritis and Rheumatism Foundation. The winners will receive from $4,000 to $6,000 for a year of intensive studies in the basic sciences related to rheumatic disease.

The Annual Davis Lecture.—"The Evolution of Medical Illustration" was the title of the Eighth Annual D. J. Davis Lecture on Medical History, April 11. Mr. Thomas S. Jones, Professor of Medical and Dental Illustration, University of Illinois, gave the lecture at the medical school. The lecture series was established by associates and friends of Dr. Davis on his retirement as dean of the Medical College in 1943.

Medical Aspects of Atomic Warfare.—A series of lectures on medical aspects of atomic warfare opened April 18 at the Chicago Medical School with a talk by Dr. A. R. Goldfarb on "Physical Aspects of Atomic Warfare." The other lectures given were Dr. Harold Koenig, "Pathology of Atomic Warfare"; Dr. Leo M. Zimmerman, "Treatment of Primary Injuries Resulting from Atomic Attack; Dr. Harold Elishewitz, "Epidemiological Aspects of Atomic Warfare"; and Dr. Goldfarb, "Methods of Treating Radiation Damage."

Lecture Series on Cancer.—A series of lectures on cancer opened at the Chicago Medical School, April 11, with a talk by Dr. Philippe Shubik, assistant professor of surgery and coordinator of oncology, at the school, on "Experimental Cancer Research." Other lecturers in this series, all members of the faculty of the medical school, were: Dr. Milton Tinsley, associate professor of neurosurgery, April 18, "Psychosurgery in the Mentally Ill and for Intractable Pain with Special Reference to Topectomy"; Dr. Bernard M. Chapman, associate in surgery, April 25, "Experiences in Cytologic Diagnosis of Cancer"; Dr. Jacob M. Essenberg, professor of microscopic anatomy, May 9, "Chronic Toxicity of Nicotine with Special Consideration of Carcinoma of the Lung"; Dr. Robert Daniel Crane, assistant in surgery, May 16, "Surgical Diseases of the Pancreas"; Dr. Paul Mandel Egel, assistant in surgery, May 23, "Surgical Diseases of the Thyroid."

The Public Health Nurse in Your Community.—A round table discussion of functions of public health nursing featured a public meeting sponsored by the Chicago Council on Community Nursing, April 2. The speakers included Miss Mary Dunlap, R.N., associate professor, nursing education, University of Chicago; Miss Gertrude Platzke, R.N., superintendent of nurses, Chicago Health Department; Mrs. Madeline Roessler, R.N., director, nursing division, Cook County Department of Public Health; Mrs. Eloise T. Phelps, R.N., superintendent of nurses, Field Division, Municipal Tuberculosis Sanitarium; Mrs. Elizabeth McCreary, R.N., Superintendent, The Infant Welfare Society of Chicago; Miss Julia MacNeill, R.N., supervisor, The Visiting Nurse Association of Chicago; and Mrs. Ruth Kelpe, director, Social Service, Michael Reese Hospital and Mandel Clinic.

Chicago Area Nursing School Staff Members Added to Northwestern Faculty.—Northwestern University has appointed to its faculty five staff members of Chicago area schools of nursing which are affiliated with the University's nursing education program.

Faculty appointments were given jointly by Northwestern's College of Liberal Arts and the Medical School's Department of Medicine to the directors of nursing and their assistants at Wesley Memorial and Passavant Memorial hospitals, both located on the Chicago campus, and Evanston Hospital, Evanston, Ill.

The title of associate professor of nursing education was given to Miss Edna S. Newman of Wesley Memorial Hospital; Miss Miriam Dolly Rand of Passavant Memorial Hospital, and to Miss Elizabeth Winnifred Odell of Evanston Hospital, all directors of nursing in their respective schools.

Miss Laura Bernice Chapman of Wesley Hospital and Miss Clare Louise Smith, Evanston Hospital, were given the rank of instructor in nursing education.

Northwestern conducts three programs in nursing education. The first offers students the diploma of a graduate nurse on completion of three years in one of the three hospitals affiliated with the University. The second program, leading to a Bachelor of Science degree and a nursing diploma, requires that the student have two years of liberal arts credits before entering the School of Nursing. One of these two years must be spent in Northwestern's College of Liberal Arts.

In the third nursing education program, established in November of 1950, a student may obtain a Bachelor of Science degree in nursing in addition to the diploma in nursing after completion of 90 quarter hours in any accredited university and three years in the School of Nursing.

KNOX

Society News.—Dr. Robert L. Jackson, professor of pediatrics, University of Iowa College of Medicine, discussed "The Diagnosis and Treatment of Rheumatic Fever" before the Knox County Medical Society, March 15.

MACON

Society News.—At the recent meeting of the Macon County Medical Society in Decatur, Dr. Leonard Corden, Chicago, discussed "Practical Considerations in Management of Coronary Disease."

Personal.—Dr. Wayne W. Zimmerman has been certified by the American Board of Orthopedics, according to the Macon County Medical Society Bulletin.

MACOUPIN

Physician Honored.—Dr. Otto Hauser, Mount Olive, who has been practicing for more than fifty years, was given a dinner, March 27, by the Montgomery and Macoupin County Medical Societies. The occasion marked his induction into the Fifty Year Club of the Illinois State Medical Society and presentation of the insignia, emblematic of the honor, was made by Dr. F. Garm Norbury, Jacksonville.

MADISON

Society News.—Dr. George G. Logan, Rochester, Minnesota, addressed the Madison County Medical Society recently on "Management of Asthma and Hayfever in Children."

MORGAN

Society News.—Mr. George E. Hall, staff associate, Bureau of Legal Medicine, American Medical Association, addressed a joint meeting of the physicians, dentists, attorneys and pharmacists of Morgan and Scott Counties, March 29, sponsored by the Morgan County Medical Society. His subject was "Some Problems in Forensic Medicine."

ROCK ISLAND

Society News.—The Iowa and Illinois Central District Medical Association met in Rock Island, March 21, to hear Dr. Thomas H. Seldon, Rochester, Minn., discuss "Blood Transfusions." Dr. Otto C. Stegmaier, Davenport, Ia., also spoke on "The Management of Common Skin Rashes." The May 16 meeting was addressed by Dr. Raymond Muther, St. Louis, on "Jaundice" and Dr. Lester R. Dragstedt, Chicago, on "The Present Status of Vagotomy in the Treatment of Peptic Ulcer."

Fifty Year Membership.—Dr. J. E. Westerlund, who has been practicing medicine in Cambridge since 1900, was inducted into the Fifty Year Club of the Illinois State Medical Society recently. Presentation of the insignia was made by a committee representing the Henry County Medical Society consisting of Dr. Ann Hopwood, Galva, president of the society; Dr. Fred Stewart, Kewanee, secretary; and Drs. A. I. Mathre and Manfred Kydan of Cambridge.

Staff Election.—Dr. S. Errico was elected president of the Moline Public Hospital medical staff at its annual meeting, March 9, succeeding Dr. F. E. Bollaert. Other officers chosen include Dr. M. F. Weissman, vice president; and Dr. B. K. Williamson, secretary. Elected to the executive committee were Dr. R. D. Perkins, Dr. H. C. DeBourcy and Dr. L. D. Barding. Members of the credential committee named were Dr. Bollaert, Dr. L. Gamburg, Dr. J. R. Goran, Dr. J. G. Gustafson, Dr. J. K. Hanson, Dr. L. S. Helfrich and Dr. L. J. McCormick.

SANGAMON

Society News.—Dr. Thomas Douglas, Chicago, addressed the Sangamon County Medical Society March 1, in Springfield, on "Diagnosis of Tumors of the Colon."

Eighty-Seven Years of Age.—Dr. M. M. Bradley, who practiced medicine for more than fifty-two years in Chatham, observed his eighty-seventh birthday recently.

WINNEBAGO

Society News.—Dr. H. Drell discussed "The Welfare State" before the Winnebago County Medical Society, in Rockford, March 23.

GENERAL

Study of Prevalence of Chronic Disease.—A grant of $60,000 has been made to the Hunterdon County (New Jersey) Medical Center to finance the study of the incidence of disabling chronic illness in the rural population. The study will be based on plans developed by the Commission on Chronic Illness and will be carried out by the Hunterdon Medical Center under the direction of Dr. Ray E. Trussel, director. A second study among the rural population is also planned by the commission but this study is still not definitely worked out.

Dr. Lescohier Retires.—Dr. A. William Lescohier, one of the nation's outstanding leaders in the pharmaceutical industry, retired recently as president of Parke, Davis & Co., a post he had held since March 1, 1938. He was succeeded in the 85-year-old company's top post by Harry J. Loynd, who had been vice president in charge of domestic and Canadian sales and promotion since June, 1945. The Lescohier, past president of the American Drug Manufacturers' Association, will continue to serve on Parke-Davis' board of directors.

Personal.—Mrs. Dorothy Bryan, recently connected with the American Foundation for the Blind, New York City, has been named assistant director of special education in charge of services for children with defective vision, Illinois Department of Public Instruction. She succeeds Miss Lillie Mae Rickman, who resigned to join the faculty of Illinois State Normal University.

MARRIAGE

Dr. John S. Garvin, Chicago, to Miss Betsy Stone, April 7.

DEATHS

Charles L. Boon, Washburn, who graduated at Chicago College of Medicine and Surgery in 1909, died in his home, March 11, aged 68. He had practiced medicine in Washburn since 1915.

Frank Buckmaster, Effingham, who graduated at Barnes Medical College, St. Louis, Mo., in 1899, died March 3, aged 76. He was a member of the "Fifty Year Club" of the Illinois State Medical Society.

Warren E. Burgett, Bement, who graduated at Kentucky School of Medicine, Louisville, in 1886, died March 14, aged 92. He was a member of the "Fifty Year Club" of the Illinois State Medical Society.

Henry B. Carriel, retired, Kankakee, formerly of Elgin, who graduated at Northwestern University Medical School in 1888, died April 1, aged 87.

Charles T. Dolezal, Chicago, who graduated at Western Reserve University School of Medicine, Cleveland, Ohio, in 1926, died March 19, aged 51. He was assistant director of the American Hospital Association.

Frederick B. Fellow, Wheaton, formerly of Glen Ellyn, who graduated at Chicago College of Medicine and Surgery in 1914, died March 4, aged 85, in Memorial Hospital of DuPage County, Elmhurst.

Oliver J. Flint, Princeton, who graduated at Northwestern University Medical School in 1898, died March 25, aged 80. He had served for 28 years as president of the Bureau County Tuberculosis Society.

John L. Fudema, Chicago, who graduated at Bennett Medical College, Chicago, in 1914, died March 22, aged 61. He was on the staff of St. Elizabeth's Hospital.

Spencer S. Fuller, Riverside, who graduated at Rush Medical College in 1902, died April 3, aged 77. He was health commissioner of Riverside.

Robert H. Graham, Aurora, who graduated at Rush Medical College in 1920, died March 20, aged 57. He had practised as a pediatrician in Aurora for many years.

Augustus Hollands, Kenilworth, who graduated at Chicago College of Medicine and Surgery in 1917, died March 23, aged 66.

Robert B. Jack, retired, Mount Vernon, formerly of Opdyke, who graduated at Barnes Medical College, St. Louis, in 1898, died March 7, aged 88.

Jesse T. McDavid, Decatur, who graduated at Barnes Medical College, St. Louis, in 1904, died March 20, aged 73. He was on the surgical staffs of St. Mary's Hospital and the Decatur and Macon County Hospital, and he was a past president of the Macon County Medical Society.

Frederick A. McGrew, Table Grove, who graduated at Rush Medical College in 1893, died March 7, aged 85.

William H. Maley, Galesburg, who graduated at Rush Medical College in 1897, died March 7, aged 84. He had practiced medicine in Galesburg since his graduation.

James M. Mitchell, Oblong, who graduated at Hospital College of Medicine, Louisville, in 1901, died March 28, aged 96. The Crawford County Medical Society honored him on his 90th birthday. He had practiced medicine in Oblong since his graduation.

Arthur F. Schuettler, East St. Louis, who graduated at Dunham Medical College, Chicago, in 1915, died March 22, aged 60.

Clifford J. Spruce, retired, Chicago, who graduated at Jenner Medical College, Chicago, in 1907, died March 20, aged 81.

John H. Spyker, Decatur, who graduated at College of Physicians and Surgeons of Baltimore, Md., in 1902, died March 25, aged 74. He had practiced as a pediatrician in Decatur since 1903.

Albert M. Wickstrom, Chicago, who graduated at the University of Illinois College of Medicine in 1906, died in April, aged 79.

TREATMENT OF PULMONARY TUBERCULOSIS

Streptomycin is exceedingly valuable in the treatment of pulmonary tuberculosis and its complications provided its limitations are realized and it is given at the most opportune time in the treatment program. Therapy programs are not rigidly standardized but the most common practice is to give 1 gram a day for not more than sixty treatment days. On regimens of this type toxicity is seldom a major problem. There is evidence that para-aminosalicylic acid when given with streptomycin delays the emergence of resistant strains. The most important things to bear in mind when treating pulmonary tuberculosis with streptomycin are that its action is only suppressive, of limited duration, and the drug is always to be used in conjunction with other therapeutic methods of established merit. *Excerpt: Streptomycin in the Treatment of Pulmonary Tuberculosis, Paul Murphy, M.D., St. Louis, J. Missouri M.A., March,* 1951.

"FOR THE COMMON GOOD"

Health Talk on TV.—Since the last issue of the Illinois Medical Journal, the following telecasts have been presented by the **Educational Committee** over **WGN-TV, Channel 9, Monday evenings, 9 p.m.:**

John F. Sheehan, April 2, Lumps, Tumors and Cancers.

Carl C. Pfeiffer, and Theodore R. Sherrod, April 9, Test Tube—To Chemical—To Drug—To You.

Sidney O. Levinson, April 18, The Patient Needs Blood.

Your Doctor Speaks over WFJL, Thursday, evenings at **7:30 p.m.,** carried the following transcribed broadcasts under the auspices of the **Educational Committee:**

Albert H. Andrews Jr., April 12, Bronchoscopy.

James T. Case, April 19, The Story of X-Ray.

Richard A. Perritt, April 26, Glaucoma.

Arthur J. Atkinson, May 3, Physiology of Digestion.

Here is Your Doctor over Station WCFL, Saturday mornings at **11 a.m.,** presented the following physicians in transcribed broadcasts under the auspices of the **Educational Committee:**

Leonard F. Jourdonais, March 31, Diabetes Mellitus.

Irving F. Steck, April 7, The Story of Arthritis.

Wright Adams, April 14, Coronary Heart Disease.

Edward L. Jackson, April 21, Obesity: A Serious Problem.

Lectures Arranged Through the Education Committee:

Paul Ashley, Chicago Heights, April 9, Ingalls Memorial Guild, Maybe It Isn't Cancer!

Henry DoLlear, Jacksonville, April 24, Lakeview High School, Decatur, Understanding Yourself.

Paul K. Anthony, Chicago, May 15, St. John Fisher Holy Name Society, Giving Blood Gives Life.

John L. Switzer, Chicago, May 19, Dorothy Slutsky Memorial Club, Rheumatic Heart Disease.

Lectures Arranged Through the Scientific Service Committee:

Walter W. Carroll, Chicago, April 18, Kane County Medical Society in Aurora, Cancer of the Head and Neck, illustrated.

N. C. Gilbert, Chicago, May 17, Fulton County Medical Society, in Canton, Coronary Insufficiency as a Causative Factor in Heart Disease.

George Cummins, Chicago, June 14, Fulton County Medical Society, Canton, Cardiovascular Aspects of Aging, illustrated.

Postgraduate Conference Arranged by Postgraduate Education Committee:

In **La Salle,** at the **Kaskaskia Hotel, Thursday, April 19,** for the **Second Councilor District,** including the counties of Bureau, La Salle, Lee, Livingston, Marshall, Putnam, Whiteside and Woodford. The **La Salle County Medical Society** acted as host, with the following physicians participating:

B. M. Kagan, director of pediatric research, Michael Reese Hospital, Antibiotics in Pediatrics, illustrated.

Eugene A. Hamilton, clinical instructor in bone and joint surgery, Stritch School of Medicine of Loyola University, Care of Fractures by the General Practitioner.

Ralph E. Dolkart, assistant professor of medicine, Northwestern University Medical School, ACTH and Cortisone in a Community Hospital, illustrated.

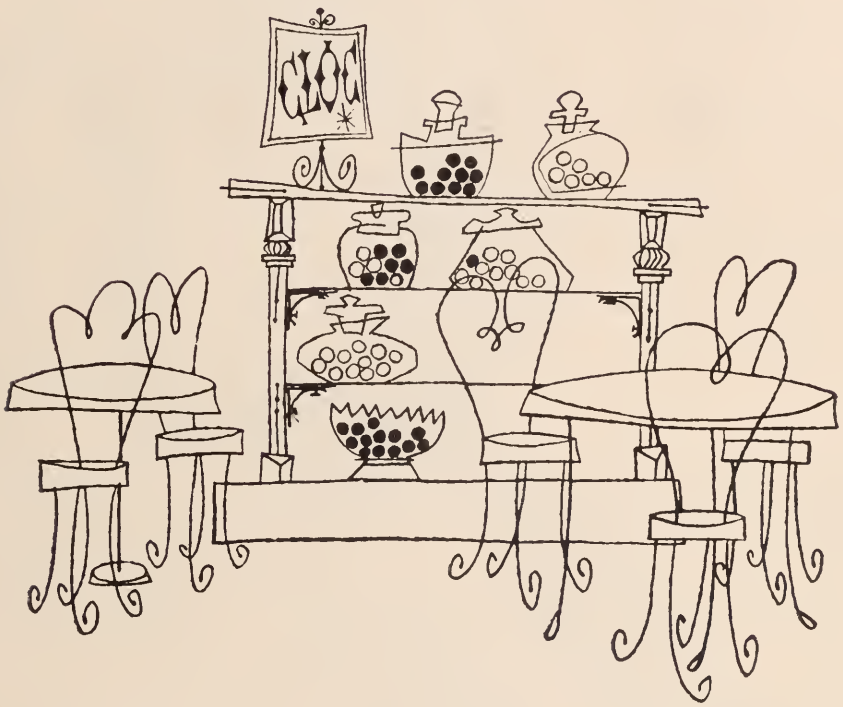
George Vlasis, member of the staff, Chicago Maternity Center, Office Gynecology.

Joseph B. Kirsner, associate professor of medicine, Division of Biological Sciences, University of Chicago School of Medicine, Current Status of Anti-Secretory Drugs, illustrated.

Following the evening dinner, **Harold M. Camp,** Monmouth, Secretary of the Illinois State Medical Society, discussed Voluntary Prepaid Medical Insurance. The evening speaker, **Ormand C. Julian,** clinical assistant professor of surgery, University of Illinois College of Medicine, gave an illustrated presentation on Anticoagulant Therapy.

The presiding officers were **Thomas Ryan,** Ransom, president, La Salle County Medical Society, for the afternoon session; and **Joseph T. O'Neill,** Ottawa, Councilor of the Second District, evening session.

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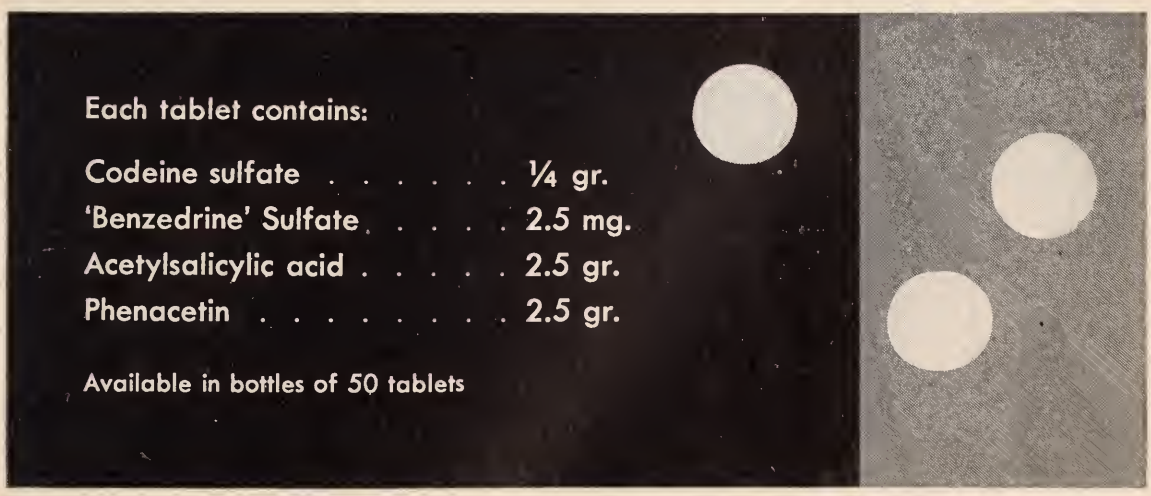
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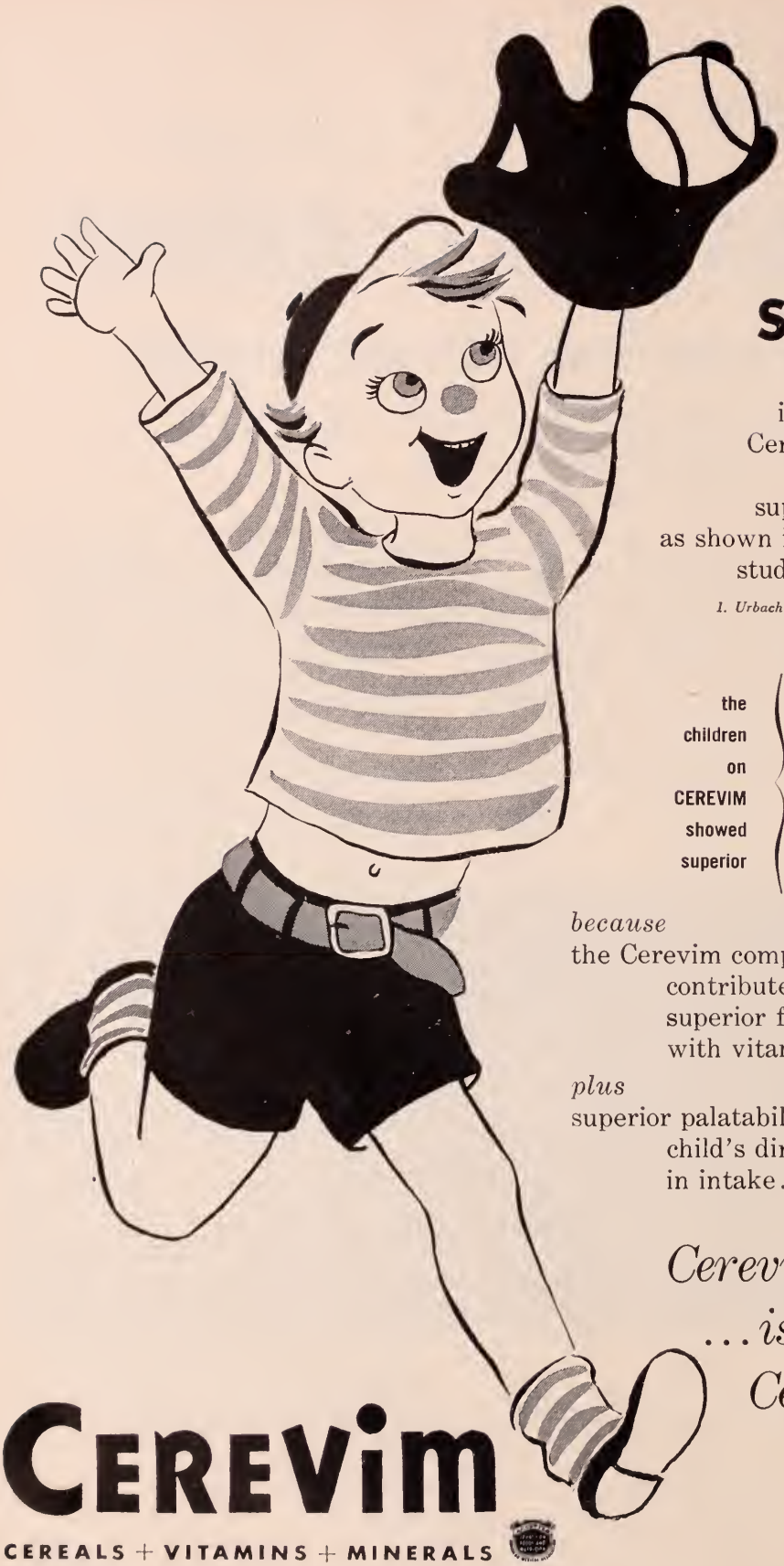
. . . and spontaneous favorable comments were heard more frequently.



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1. Long, C-F.: A Controlled Industrial Study of an Analgesic Compound, EDRISAL with CODEINE, Indust. Med. *19*:446 (September) 1950.

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1. Urbach, C.; Mack, P. B., and Stokes, J., Jr.: Pediatrics 1:70 (Jan.) 1948.

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- skeletal maturity
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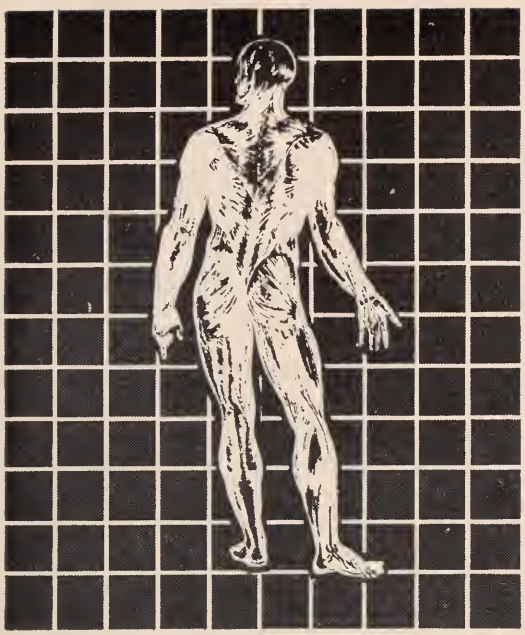
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PSORIASIS	11	2	4	5
NEURODERMATITIS	5	3	2	–
ATOPIC ECZEMA	8	6	1	1
SEBORRHEIC DERMATITIS	6	5	1	–
VARICOSE ECZEMA	4	1	1	2
ALLERGIC DERMATITIS	3	–	2	1
LICHEN PLANUS	3	2	1	–
TOTAL	51	28	13	10
%		54.9	25.5	19.6

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**Lowenfish, F.P., N.Y. State J. Med., 50:922 (Apr. 1) 1950.*

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Contrary to the former traditional practice of restricting dietary protein, especially meat protein, in arterial hypertension, it is now recognized that adequate amounts of complete protein are needed by the hypertensive patient. The patient with hypertension, in common with normal individuals, should receive the usual allotment of protein, 60 to 70 grams per day.[1] This protein intake promotes a sense of well-being.

The previous belief that the high specific dynamic action of protein imposes excessive demands on the heart of the hypertensive patient has also been discredited clinically. Curtailment of the protein intake below that needed for metabolic requirements depletes body protein reserves, leads to excessive weakness, interferes with many immunologic reactions, and often is a factor in anemia or in its intensification.[2] Rather than an indication for restricting protein, albuminuria in hypertensive disease is an indication for determining whether the patient's protein intake should be increased to compensate for urinary losses.

In hypertension, the aim of the diet is to provide optimal amounts of protein, vitamins and minerals and to maintain the hypertensive patient at normal weight. By increasing the work of the already overburdened heart, obesity renders the patient more vulnerable to the hazards of hypertension. When weight reduction is indicated, lean meat may well be the mainstay of the dietary regimen. For patients requiring restriction of sodium, only unsalted meats should be used.

Furnishing large amounts of biologically complete protein, muscle meat can contribute valuably to the protein requirements of the hypertensive patient. But meat represents much more than just an excellent protein food. It also provides valuable amounts of iron and the B complex vitamins, including niacin, pyridoxine, riboflavin, thiamine, and the newly discovered vitamin B_{12}.

---

(1) Mann, G. V., and Stare, F. J.: Nutritional Needs in Illness and Disease, J.A.M.A. *142*:409 (Feb. 11) 1950.

(2) Stieglitz, E. J.: Hypertensive Arterial Disease and Hypotension, Chapter 30, Geriatric Medicine, The Care of the Aging and the Aged, 2nd ed., Philadelphia, W. B. Saunders Company, 1949.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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PHYSICAL MEDICINE ABSTRACTS



RESULTS OF TREATMENT OF SUBACROMIAL BURSITIS IN THREE HUNDRED FORTY CASES

Guy A. Caldwell, M.D., and Byron M. Unkauf, M.D., New Orleans, La. In ANNALS OF SURGERY, 132:3:432, September 1950

Subacromial or subdeltoid bursitis, long recognized as a clinical entity, is manifested by acute, subacute and chronic symptoms referable to the shoulder and arm and caused by lesions in the muscular tendinous cuff over the head of the humerus and in the subacromial bursa. Patients afflicted with subacromial bursitis tend to recover spontaneously, the time required for recovery varying from a few weeks up to two or three years, depending upon the nature and stage of the lesion. However, in many the symptoms are so severe or so annoying that the majority of patients seek treatment for relief. Among the many therapeutic measures used from time to time are simple and complicated applications of heat, injections of the bursa and adjacent nerves, roentgen therapy and incisions for relief of tension and removal of calcified deposits from the supraspinatus tendon and subacromial bursa. The fact that such varied forms of treatment have been recommended for the same condition strongly suggests that none is specific.

The records of 485 patients with subacromial bursitis treated in the Ochsner Clinic during the seven-year period ending July 1949 were analyzed in an effort to evaluate the various methods of treatment employed. The treatments most used, regardless of the stage of the disease, were procaine injections and roentgenotherapy, each supplemented by physical therapy; some patients were treated with physical therapy alone. Follow-up reports of the results obtained on 340 patients after an average period of three years were analyzed with reference to stage of the disease at the time treatment was given. Analysis of these results indicates that:

(1) Satisfactory relief of pain and restoration of a useful range of motion may be obtained by conservative measures in 70 to 85 per cent of cases.

(2) Roentgen therapy is an effective measure for the relief of pain produced by tension within the supraspinatus tendon in 85 per cent of cases.

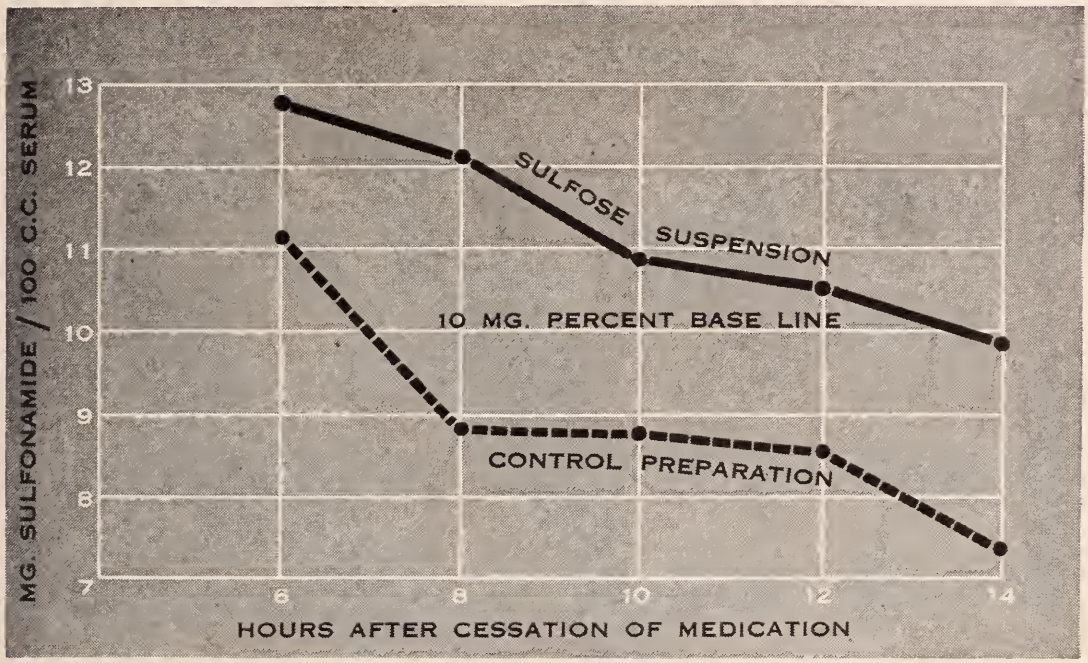
(3) Physical therapy is a necessary adjunct to all other measures that may be employed. Physical therapy alone is adequate for many subacute or mild chronic cases.

(4) Recurrent attacks are to be anticipated in 22 per cent of case following acute or subacute symptoms and in 33 per cent of patients with chronic symptoms.

(5) The presence or absence of calcified deposits seems to have no relation to the various

(*Continued on page* 62)

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1. Thewlis, M., and Gale, E. T.: Ambulatory Care of the Aged, Geriatrics, 5:331 (Nov.-Dec.) 1950.

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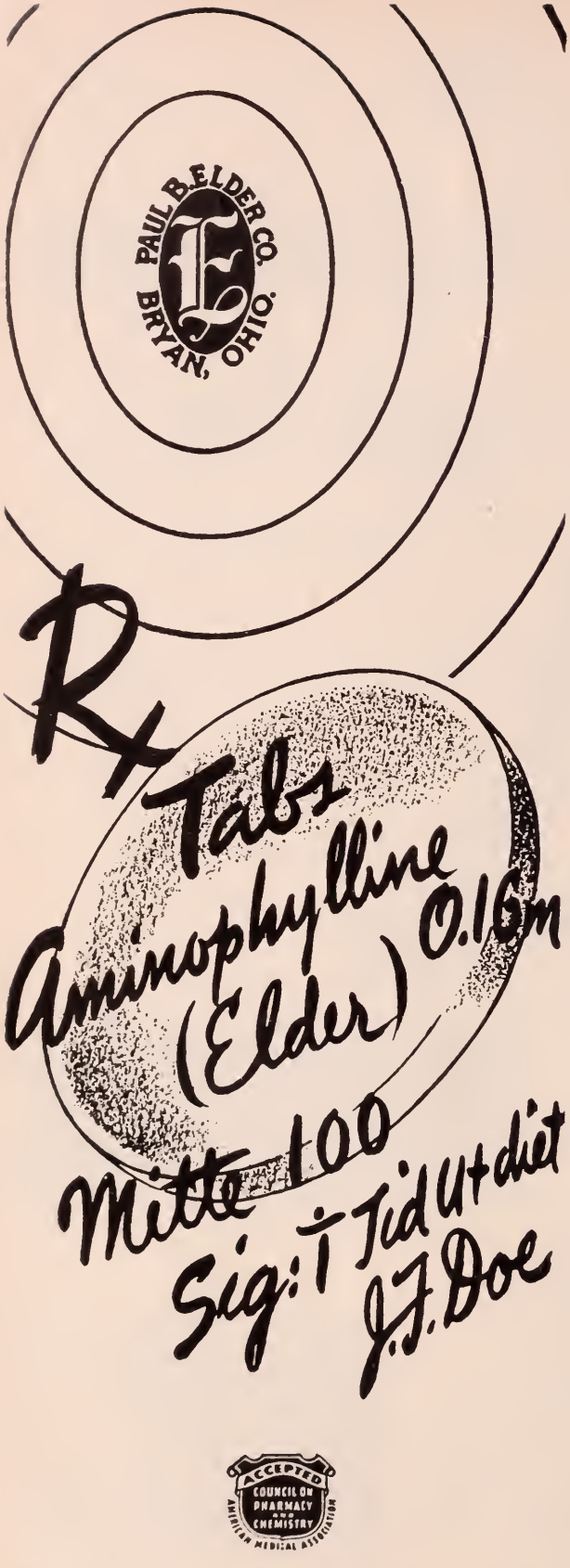
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1. Hock, C.W.: J. Med. Assn. Ga. 40: Jan., 1951
2. Hufford, A.R.: J. Mich. St. Med. Soc. 49:1308, 1950
3. Chamberlain, D.T.: Gastroenterology 17: Feb., 1951

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Physical Medicine (Continued)

stages nor to the incidence of recurrent attacks.

(6) The longer the symptoms have persisted the poorer the outlook for relief by conservative measures. In the chronic group of cases 33 per cent had poor results.

REHABILITATION OF CIVILIAN PARAPLEGICS IN CANADIAN DEPARTMENT OF VETERANS' AFFAIRS HOSPITALS

G. Gingras, M.D., Montreal, Canada. In ARCHIVES OF PHYSICAL MEDICINE, 31:12:772, December 1950.

The admission and treatment of civilian paraplegic patients in Canadian departmental hospitals have been a most interesting and valuable experience. There is no doubt in anyone's mind that, generally speaking, the physical and mental conditions of civilian patients have always been, and still are, far worse than those of the veterans who were injured overseas and were repatriated in difficult circumstances. Financial insecurity, the facts that the civilians' age bracket generally is higher than the veterans' and that there are families to support tend to aggravate social and emotional problems, which often are so acute that many patients have demanded a tremendous amount of patience and work from the staff. A last feature worthy of mention is the fact that public interest and help are not readily aroused toward the civilians, in comparison with the all-out efforts to aid the veterans.

OCCUPATIONAL THERAPY IN A GENERAL AND SURGICAL HOSPITAL

C. O. Molander, M.D., Chicago In ARCHIVES OF PHYSICAL MEDICINE, 31:12:757, December 1950.

In my opinion, there are many reasons that occupational therapy has not progressed in civilian hospitals. Some of them are the following:

(1) Postwar apathy.

(2) Poor location of occupational therapy facilities. The occupational therapy workshop and the physical therapy unit must be contiguous for efficient service.

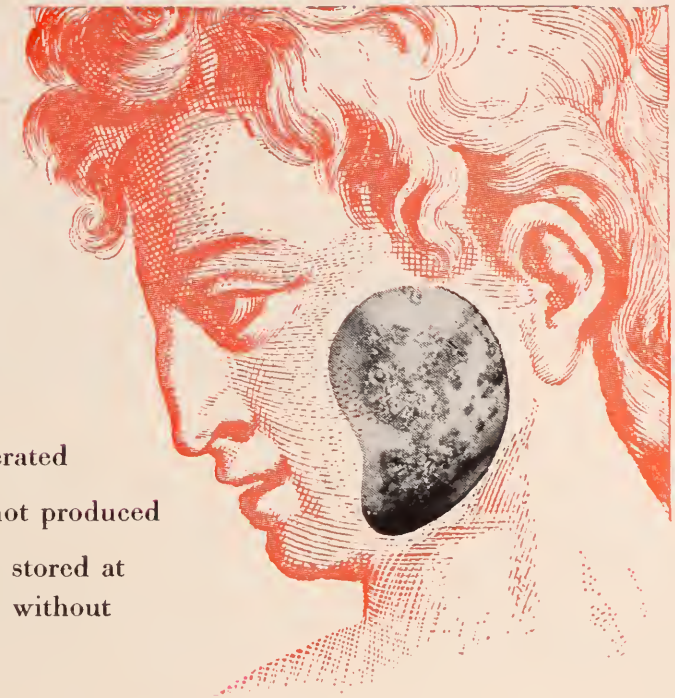
(3) Lack of funds.

(4) Lack of research.

(5) Lack of medical supervision. Occupational therapy, like physical therapy, suffers from lack of proper medical supervision, because

(*Continued on page* 64)

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there are not enough physiatrists to go around.

(6) Lack of qualified therapists. We must face the future with a more complete understanding of our problems — a realization that we are living at a period when many accepted beliefs and professional traditions are being discarded on the basis of experience and experimental study. Occupational therapists and physical therapists must realize that they are an integral part of physical medicine, each complementing the other.

In summary, the principles of coordination should be embodied in actual practice. Recent graduates of occupational therapy schools should serve a brief internship in physical therapy units, and physical therapists should likewise serve in occupational therapy departments. Thus, actual experience will be gained, and a more thorough understanding of each other's problems can be attained.

MULTIPLE SCLEROSIS: A CORRELATION OF ITS INCIDENCE WITH DIETARY FAT

Roy Laver Swank, M.D., Montreal, Canada. In THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, 220:4:421, October 1950.

In a discussion of factors which influence the incidence and character of the disease multiple sclerosis, the variations in its geographic incidence deserve special consideration. The prevailing concept that the disease is more common in northern and colder than in southern and warmer climates is based on incomplete and inadequate evidence, but the absence of a known cause of multiple sclerosis forces us to examine this evidence more closely.

In an epidemiologic study of multiple sclerosis in Europe, changes in the nutrition before, during, and since the war have been correlated with the yearly incidence of the disease during this same period. These data, plus other collected observations, suggest that possibly the incidence

(*Continued on page 66*)

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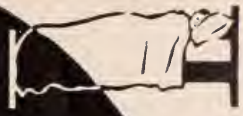
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of the disease in entire populations may be related directly to the dietary fat. It seems clear from the observations presented in this paper, as well as from unreported clinical studies, that a high fat diet is not the cause of multiple sclerosis even though it may contribute to a high incidence of the disease by accelerating it in susceptible individuals.

PLANNING A SMALL RADIOISOTOPE PROGRAM

George W. Reid, Associate Professor of Sanitary Engineering, Georgia Institute of Technology, Atlanta, Ga., and Oscar M. Bizzell, Radiochemist, Isotopes Division, Atomic Energy Commission, Oak Ridge, Tenn. In INDUSTRIAL MEDICINE AND SURGERY, 19:12:25, December 1950.

Many prospective radioisotope users are unfamiliar with the problems that must be faced when setting up an isotope program. Two of the major difficulties involve an unfamiliarity with nomenclature and with the prerequisites for the safe handling of radioactivity. Although isotopes are valuable tools in research, one should not attempt to use them until thorough training has been acquired.

Adequate preliminary training is essential if one is to avoid pitfalls encountered in the design of radioactive laboratories, purchasing of equipment, drawing of false conclusions from experiments, etc. All aspects of the planned program should be investigated thoroughly before any definite action is taken. Budgetary considerations can be met by careful program planning, careful design of the laboratory, and judicious selection of equipment. Sources of information and assistance are available by means of which starting a small isotopes program can be more readily accomplished.

HOW OCCUPATIONAL THERAPY HELPS IN PSYCHIATRY

Winfred Overholser, M.D., Sc.D., and Virginia D. Coffin, B.S., O.T.R., Washington, D. C. In ARCHIVES OF PHYSICAL MEDICINE, 31:12:749, December 1950.

Occupational therapy can play an important role in the recovery of the mentally disturbed

(*Continued on page* 68)

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...THIS COMBINATION HELPS RESTORE ENERGY, FITNESS AND A SENSE OF WELL-BEING

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—goes beyond the provision of estrogen sufficiency—it treats also the patient's nutritional state by providing a balanced estrogen-vitamin formula.

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if the therapist has understanding and compassion for the mentally disturbed, if she is well adjusted and understands her own needs and the ways in which she fulfils them and if she realizes that meaningful interpersonal relationships are the basis and the goal of her treatment.

FROSTBITE

Colonel Wayne G. Brandstadt, M.C., U. S. Army. In THE MILITARY SURGEON, 107:5:386, November 1950.

For the purpose of urgent first aid in hypothermia the patient should be placed in warm surroundings, given energetic and prolonged massage, given calcium chloride intravenously, and given hot drinks by mouth. In massaging, excessive traumatization of the skin must be avoided. After wiping the skin with alcohol swabs the patient should be wrapped in a sterile towel, pulling strongly on the edges so as to bring it tightly into contact with his body. This is followed by energetic massage over the towel with the open palm. This method has great advantages even over massage with the hand in a sterile glove, since it is milder, easier on the skin, develops a great amount of heat and gives the maximum protection against infection. Massage should not be given when several hours have elapsed after the occurrence of frostbite, because by that time inflammatory symptoms will have appeared and the injured tissues are then in need of absolute rest, plus warming.

POSTURE—ITS ROLE IN OBSTETRICS AND GYNECOLOGY

Leonard B. Greentree, M.D., Columbus, Ohio In THE OHIO STATE MEDICAL JOURNAL, 46:11:1066, November 1950.

So far, very little in medical literature has appeared concerning the important role of good posture in obstetrics and in gynecology. Obstetricians have begun to be aware of this importance, and so have gynecologists; but so far the most common procedure has been to turn over to orthopedic surgeons the few patients in most obvious need of help, and do little for the others. The writer submits that more stress on posture

(Continued on page 70)

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From The Literature

- Bubert and Cook, Bulletin of School of Medicine, Univ. of Maryland, Vol. 32, pp. 175-190, 1948.
- Paul and Montgomery, J. Iowa State Med. Soc., June, 1948.
- Krantz, Holbert, Iwamoto and Carr, J.A.Ph.A., Vol. 36, pp. 248-250, 1947.
- New and Non-official Remedies, 1950, p. 285.

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by the obstetrician-gynecologist for practically *all* patients will result in better health during and after pregnancy, do much to improve the individual patient's figure (an important consideration to many women in childbearing), and be of beneficial effect for many gynecological patients part of whose difficulties, at least, may be faulty posture.

Applying the principles of normal body mechanics can be a useful adjunct to other measures employed in obstetrics and gynecology. Good posture often notably improves the health and figure of the patient. This paper has attempted to show:

(1) The standards of normal posture.

(2) Methods of making postural examinations.

(3) The importance of an orthopedic consultation when unusual postural defects are present.

(4) Procedures whereby good posture is maintained and faulty posture is improved.

THE TREATMENT OF CAUSALGIA AND ALLIED DISORDERS IN EMPLOYED PERSONS

Benjamin B. Whitcomb, M.D., Hartford, Conn. In INDUSTRIAL MEDICINE AND SURGERY, 19:11:519, November 1950.

Whereas the treatment of true causalgia is gratifying, the treatment of the allied disorders frequently is not. The former is an uncommon disorder and is seen principally in war casualties, while the latter are more common and are more frequently encountered as results of industrial accidents. They are more likely to occur in those persons who have hyperactive sympathetic nervous systems subject to psychological complications.

Treatment usually is associated one way or another with the interruption of the sympathetic reflex arc and should be carried out by beginning with the simplest procedures in the following order:

(1) Physical therapy with reassurance from an understanding physician.

(2) Drugs—sympatholytic agents, mild sedatives, avoiding analgesics and narcotics.

(3) Procaine injection locally.

(4) Sympathetic ganglion block.

(5) Sympathetic surgery should be reserved

(Continued on page 72)

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"Not often do either globin insulin or a 2:1 mixture require supplementary use of regular insulin. Fully 80% of all severe diabetics can be balanced satisfactorily with one of them."[2]

1. *Reeb, B. B., Rohr, J. R., and Colwell, A. R.: Proc. House Staff Dept. Med., Wesley Memorial Hospital, Chicago, Ill. Feb. 6, 1948.*

2. *Rohr, J. H., and Colwell, A. R., Proc. Amer. Diabetes Assn. 8:37, 1948.*

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Physical Medicine (Continued)

for the most refractory cases that have a favorable but temporary response to sympathetic ganglion block.

The disability should not be long, whatever the form of treatment used, and should not result in any degree of permanent disability nor be associated with financial gain. The latter would seem only further to cloud and prolong the clinical picture.

BIOCHEMICAL ALTERATIONS IN ACUTE HUMAN POLIOMYELITIS: ELECTROLYTE PATTERNS AND TRENDS

Albert G. Bower, M.D., Jack Sheldon Chudnoff, M.D., and Albert L. Chaney, Ph.D., Los Angeles. In CALIFORNIA MEDICINE, 73:5:406, November 1950.

Pronounced alterations occur in the biochemical findings in acute poliomyelitis. These are derived from three major mechanisms: (a) inefficient pulmonary gaseous exchange, resulting in respiratory acidosis; (b) profound changes in nitrogen metabolism, resulting in decreased serum albumin, tissue destruction, and increased urinary nitrogen; (c) losses of electrolytes through extrarenal channels such as lung and tracheal secretions, sweating, and gastrointestinal disturbances.

The extent of these alterations may be defined by appropriate serum and urinary biochemical determinations. These determinations are valuable both from a therapeutic and a prognostic standpoint. They also contribute to further understanding of physiologic and pathologic conditions in acute poliomyelitis.

PSYCHOLOGICAL CONSIDERATIONS IN THE REHABILITATION OF THE CARDIAC PATIENT IN INDUSTRY

Edward Stainbrook, Ph.D., M.D., New Haven, Conn. In INDUSTRIAL MEDICINE AND SURGERY, 19:11:528, November 1950.

In our ordinary thinking, the rehabilitation of the diseased person is usually thought of as a restoration of the capacity for work. An early nineteenth century use of the word "rehabilitation", however, suggests to us another and, perhaps, equally important meaning. This is an interpretation of rehabilitation as the reestablishment of character or reputation, or, as we might paraphrase it today, the restoration of security

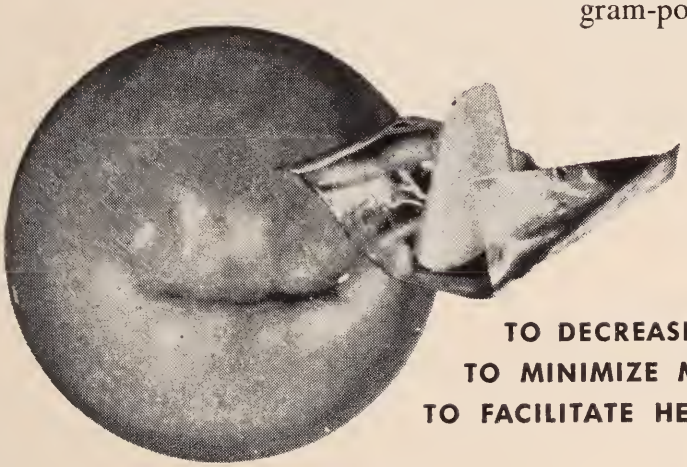
(*Continued on page* 74)

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Studies by *Kramer and Ingelfinger,* (M. Clin. North Amer., Boston No.: 1227, (1948) demonstrate the highly efficient action of Bellafoline. By balloon-kymograph studies on the human intestine they found that most commonly used antispasmodics are less effective than atropine (standard dose: 1/100 gr.). Bellafoline was the outstanding exception. It surpassed atropine in both degree and duration of action.

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Physical Medicine (Continued)

and selfesteem. This latter goal is a particular task of the rehabilitory management of cardiac disease.

A NEW "BUILD-IT-YOURSELF" CONDUCTIVE SHOE TESTER

Curtiss B. Hickcox, M.D., and Burton B. Lovell Jr., Sc.B. In HOSPITALS, 24:11:57, November 1950.

To meet today's safety standards, an operating room must have, among other things, conductive flooring. But conductive flooring is of no value unless all equipment and all persons who work in the operating room are properly grounded to this floor. Conductive shoes are recognized as an important element in this grounding chain.

Since, at present, combustible materials cannot be withdrawn from the operating room, prevention of ignition becomes the prime concern. The most difficult to control among possible source of ignition is the chance spark of static electricity.

In the most recent revision of the "Recommended Safe Practices for Hospital Operating Rooms," shoes which are suitable for operating room personnel are described.

The recommendations mentioned above were used as a guide by our hospital engineers in designing our simple, inexpensive, but dependable shoe conductivity tester. Already, it has performed satisfactorily in our operating and delivery rooms. The shoe tester described cost us about $50.

CHRONIC, CONVALESCENT AND REHABILITATION UNIT IN PEORIA

In HOSPITAL PROGRESS, 31:11:324, November 1950.

When, on August 15, the Forest Park Home—St. Francis Hospital Division was dedicated, the city of Peoria saw the near-completion of a type of health facility which few large cities can match. Among Catholic hospitals, St. Francis is the first to acquire a unit intended for chronic, convalescent and rehabilitation cases. Rehabilitation service on a limited scale is not unknown in Catholic institutions, but St. Francis Hospital is the first to tackle the problem comprehensively.

Clearly, the unit as originally planned was

(*Continued on page* 78)



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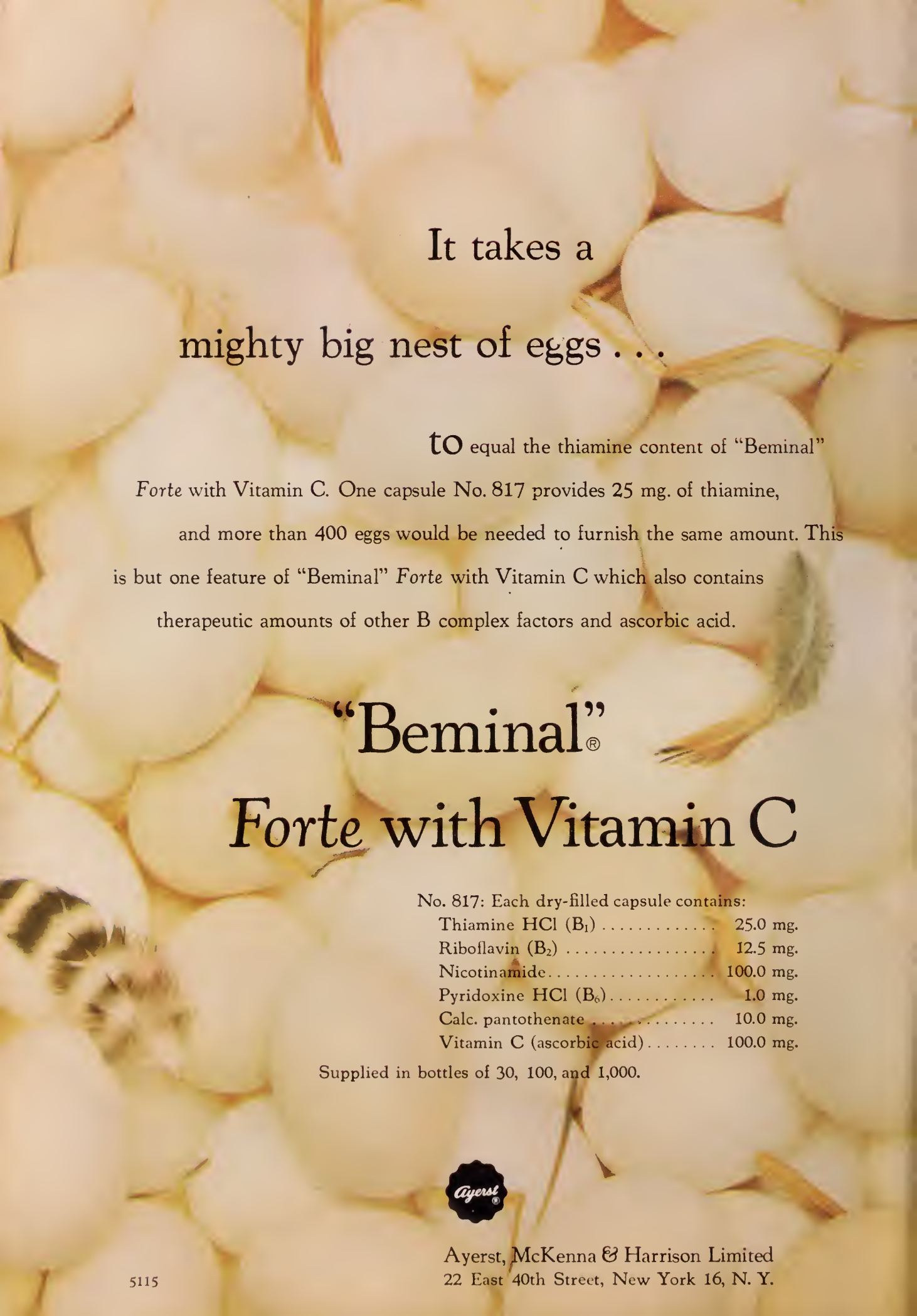
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Post-Appendectomy	3 minutes
Post-Hemorrhoidectomy	3 minutes
Post-Tonsillectomy	2 minutes
Simple Headache	½ - 3 minutes
Menstrual Pain	5 minutes



Many other dramatic cases reported.

1. Hoffman, Murray M., Ill. Dent. Jl., 19:439-445 (Oct., 1950)
2. McNealy, Raymond W., Ill. Med. Jl., 97:150 (Mar., 1950)

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Physical Medicine (Continued)

amply warranted; the addition of a rehabilitation department made the new structure an all the more valuable addition to the Peoria health facilities. Peoria was an ideal location for a rehabilitation center. The city is an industrial one, and is the headquarters of some of the largest manufacturing companies in the country, among others the Caterpillar Tractor Company; industrial accidents, with their toll in disability, inevitably occur. Support for the rehabilitation center came promptly and wholeheartedly, from plant physicians as well as others.

The rehabilitation center operated by the Institute of Physical Medicine and Rehabilitation occupies the west wing of the ground floor. When completed, the center will be very well equipped, including a swimming pool of considerable size. It has a separate entrance, contributing to the convenience of caring for ambulatory patients.

THE CARE OF HAND INJURIES

In THE JOURNAL OF THE KANSAS MEDICAL SOCIETY, 51:10:474, October 1950.

The first-aid care of wounds of the hand is directed fundamentally at protection. It should provide protection from infection, from added injury, and from future disability and deformity. The best first-aid management consists in the application of a sterile protective dressing, a firm compression bandage and immobilization by splinting in the position of function. No attempt should be made to examine, cleanse, or treat the wound until operating room facilities are available.

Following healing of skin and soft tissues and firm union of bony structures, as much function as possible should be restored by directed active use of the hand, therapeutic exercises and occupational therapy.

Reconstructive surgery often is required after such injuries to permit maximum restoration of function. Such reconstruction will be less extensive and less formidable if the early management of the injury is judiciously and carefully carried out.

A sanatorium must not be regarded as just a place where the patient has a bed and a tray and a nurse and a physician. A sanatorium, if it serves its purpose, is in the first place an atmosphere in which each patient is leading the kind of life he must lead for cure of tuberculosis. Calif. Med., Edward W. Hayes, M.D., December, 1950.

"...the only drug we have seen that allays anxiety without clouding consciousness"

J.A.M.A. *140*:672 (June 25) 1949



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- **as an adjunct in the treatment of chronic alcoholics**

DOSAGE

In anxiety tension states:

As little as 0.5 Gm., given orally every few hours, has produced a good response. However, for optimum effect, 0.75 Gm. or more is given several times a day.

As an adjunct in the treatment of chronic alcoholics:

As much as 3 Gm. orally every four hours has been found useful in the acute stage. This dosage is reduced when the patient becomes more manageable. (If Tolserol is given too soon after the patient drank alcohol, the toxic effect of the alcohol may be potentiated. For this reason, Tolserol should not be administered until six hours have elapsed since the patient drank alcohol.)

Tablets, 0.5 Gm., 0.25 Gm.; *Capsules*, 0.25 Gm.;
Elixir, 0.1 Gm. per cc.; *Solution*, 2% (intravenous).

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BOOK REVIEWS



Atlas of Histologic Diagnosis in Surgical Pathology. By Karl T. Neubuerger, M.D., Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado. With a section on Exfoliative Cytology by Walter T. Wikle, B.S., M.S., M.D. Assistant Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado. Photography by Glenn E. Mills, B.A., M.A. Department of Visual Education, University of Colorado School of Medicine, Denver, Colorado. Baltimore. The Williams and Wilkins Company. 1951. $11.00.

The purpose of this atlas is to show histologically the essentials of as many surgical pathological lesions as possible in the allotted space. There are 880 photomicrographs, each accompanied by a short discussion of the disease illustrated. Less common conditions as well as routine surgical material are included.

The principle behind the book is excellent; there is much need for a ready reference book of this kind. The inherent difficulty lies in showing enough about the pathology of a given lesion in one or two photomicrographs, and that is the chief criticism of this book, that in some cases the essential lesion is simply not shown well enough. This can be overcome by better selection of fields. There is a good deal of variation in the quality of the photomicrographs. Most are good, but in others the lighting could be improved on.

In general the book is a good one, and could be used by anyone taking a short course in pathology. It is not intended to, and will not, replace microscopic study by the student.

J. C. S.

Skull Fractures and Brain Injuries. Harry E. Mock, M.D. Consulting Surgeon, St. Lukes Hospital, Chicago. Associate Professor Emeritus of Surgery, Northwestern University Medical School. The Williams & Wilkins Co. Baltimore, 1950.

This text book by Mock should be in the hands of every practicing physician and surgeon everywhere. The reviewer had the benefit of seeing some of the cases of the Author in the past thirty years at the Cook County Hospital. The Author was one of the first general surgeons at the Cook County Hospital who instituted a definitive type of routine therapy for skull fractures and brain injuries. He outlined in clear language the indications and symptoms for a specific therapy. This alone has been a responsible factor in reducing the morbidity and mortality of skull fractures and brain injuries. Some of the author's indications for spinal punctures are debatable albeit these are not factors in causing any morbidity or mortality. This excellent text book is extremely important because of its simplicity and orderly arrangement. The majority of skull fractures and brain injuries will be managed by the general practitioner earlier than the neurological surgeon and because of that these physicians and surgeons should study and learn the indications for therapy in every case. These studies are of great importance since 45% of deaths occur in the first 24 hours. Any unnecessary treatment may be a factor that causes or helps to cause the death.

Mock discusses in detail the following forms of treatment: rest; spinal drainage; operative form; general principles of treatment. There is a chapter or more on skull fractures and brain injuries in children with extradural hematoma, subdural hemorrhage, associated injuries, post traumatic syndromes, medico legal implications, is a fairly large bibliography making this book a very desired one.

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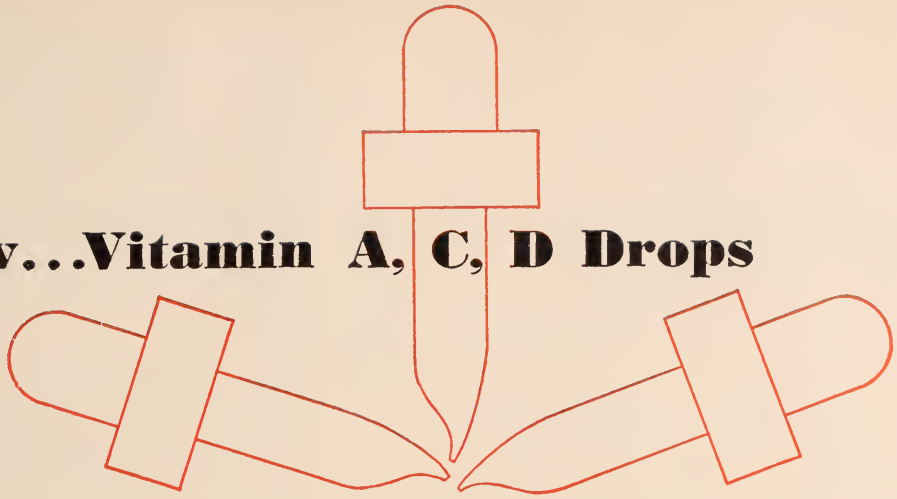
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BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

A Synopsis of Surgical Anatomy. By Alexander Lee McGregor, M. Ch. (Edin.), F.R.C.S. (Eng.) Senior Surgeon, Johannesburg General Hospital, Lecturer in Surgery, University of the Witwatersrand. With a foreward by Sir Harold J. Stiles, K.B.E., F.R.C.S. (Edin.) Seventh Edition. 746 illustrations by Dr. E. A Thomas. The Williams and Wilkins Company, Baltimore, 1950. $6.50.

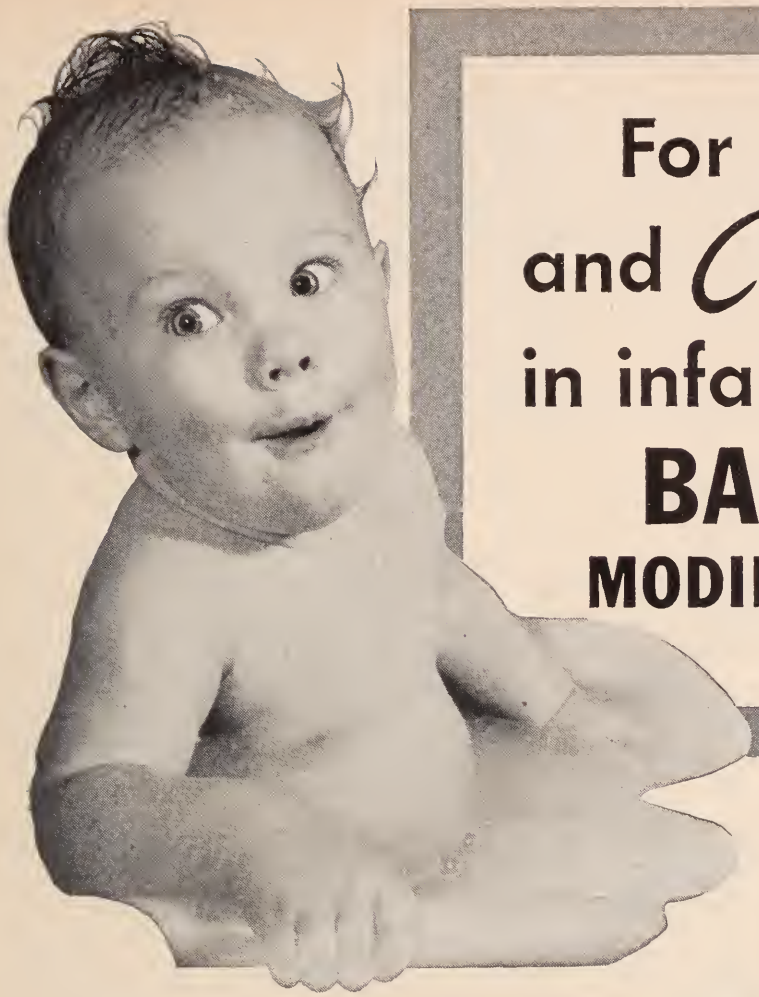
Diseases of Children, Including Dietetics & the Common Fevers. By Bruce Williamson, M. D. Edin., F.R.C.P. Lond. Physician, Children's Dept., Royal Northern Hosp., Lond.; Physician, Prince of Wales General Hospital, London; Physician, Wellhouse Hospital, Barnet; Physician, Enfield War Memorial Hospital; Physician, Hornsey Central Hospital, London; Examiner in Medicine, General Nursing Council; Consulting Physician, Pioneer Health Centre, Peckham; Etc. Sixth Edition. The Williams and Wilkins Company, Baltimore, 1951. $4.50.

Hospital Staff and Office Manual. By T. M. Larkowski, M.D., F.A.C.S., Professor of Clinical Surgery, Stritch School of Medicine, Loyola University, Chicago, Illinois and A. R. Rosanova, R. Ph., M.D., Clinical Instructor, University of Illinois Medical School, Chicago, Illinois. Romaine Pierson Publishers, Inc., Great Neck, New York, 1951.

Personnel Administration in Public Health Nursing. By William Brody, Director of Personnel, New York City Department of Health; Lecturer in Public Health Administration, Johns Hopkins University; formerly Director of Personnel, National War Labor Board. Illustratel. The C. V. Mosby Company, St. Louis, 1951. $3.25.

Textbook of Physiology and Biochemistry by George H. Bell, B. Sc., M.D. (Glasg.), F.R.F.P.S.G., F.R.S.E., Professor of Physiology in the University of St. Andrews of University College, Dundee, and J. Norman Davidson, M.D., D.Sc., (Edin.), F.R.F.P.S.G., F.R.I.C., F.R.S.E., Gardiner Professor of Physiological Chemistry in the University of Glasgow; formerly Professor of Biochemstry in the University of London at St. Thomas's Hospital Medical School, and Harold Scarborough, M.B., Ph.D. (Edin.), F.R.C.P.E., Professor of Medicine in the Welsh National School of Medicine of the University of Wales and Director of the Medical Unit in the Royal Infirmary, Cardiff; formerly Reader in Medicine in the University of Birmingham. With a foreword by Robert C. Garry, M.B., D.Sc. (Glasg.), F.R.F.P.S.G., F.R.S.E., Regius Professor of Phys-

(*Continued on page* 86)



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BOOKS RECEIVED (Continued)

iology in the University of Glasgow. Williams & Wilkins Company, Baltimore, 1950. $9.00.

BASES OF HUMAN BEHAVIOR, A Biologic Approach to Psychiatry. By Leon J. Saul, M.D., Professor of Clinical Psychiatry, University of Pennsylvania School of Medicine; Psychiatric Consultant, Swarthmore College; Lecturer, Bryn Mawr College. J. B. Lippincott Company, Philadelphia, London, Montreal, 1951. $4.00.

MEDICINE OF THE YEAR, third issue, 1951. Internal Medicine — Hugh J. Morgan, M.D., Professor of Medicine, Vanderbilt University; Psychiatry — Franklin G. Ebaugh, M.D., Professor of Psychiatry University of Colorado; Obstetrics and Gynecology — Frank Whitacre, M.D. Professor of Obstetrics and Gynecology, University of Tennessee; Pediatrics — Mitchell I. Rubin, M.D., Professor of Pediatrics, University of Buffalo, General Surgery — Warren H. Cole, M.D., Professor of Surgery, University of Illinois. Editorial Direction — John B. Youmans, M.D., Dean, School of Medicine, Vanderbilt University. $5.00.

PIONEER DOCTOR. By Lewis J. Moorman, M.D. University of Oklahoma Press. Norman, 1951. $3.75.

THE DOCTOR, His Career, His Business, His Human Relations. By Stanley R. Truman, M.D., The Williams & Wilkins Company, Baltimore, 1951. $3.00.

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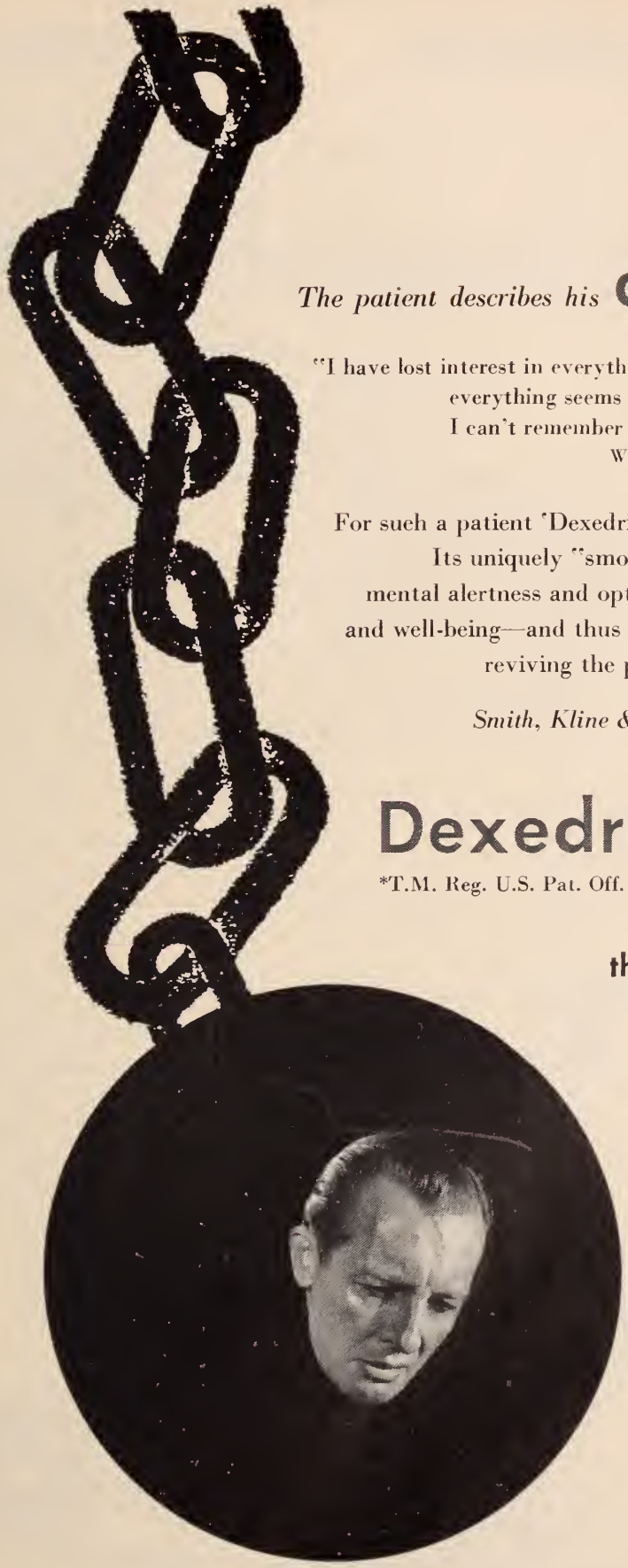
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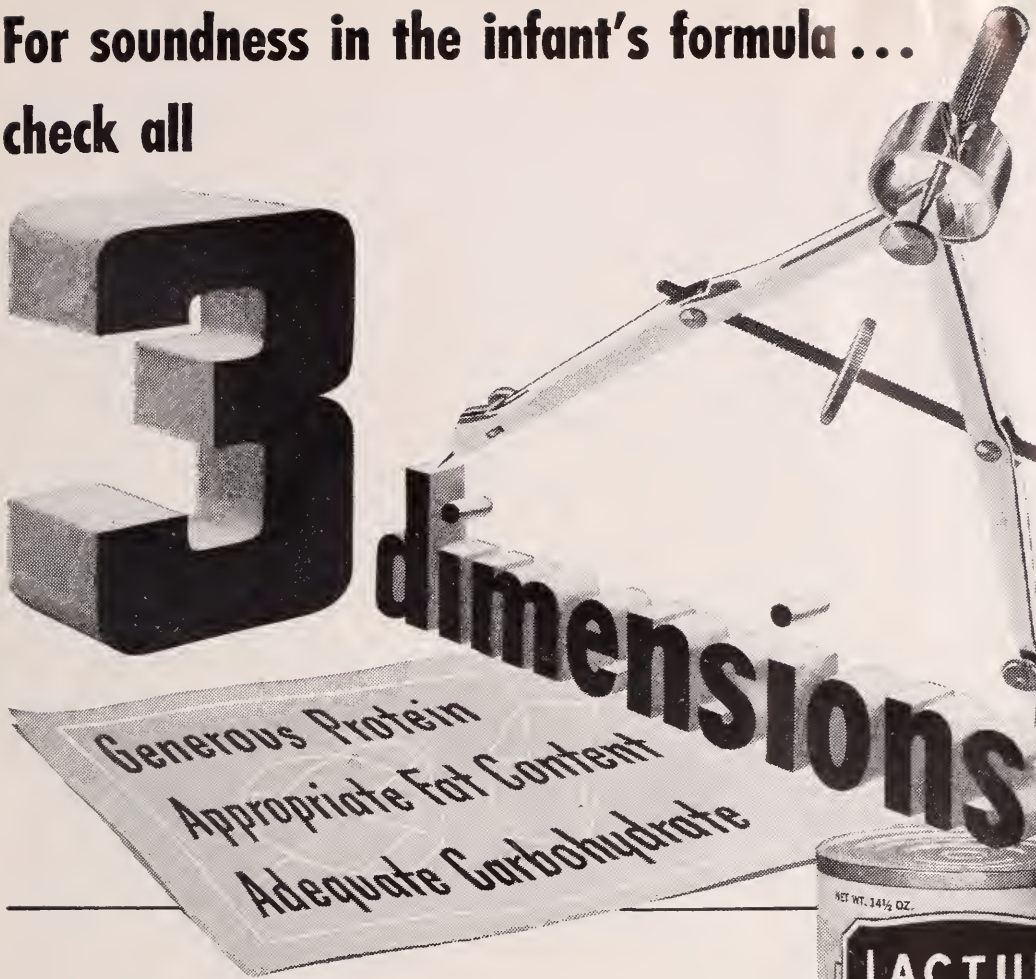
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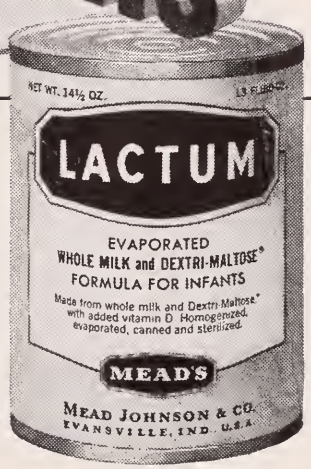
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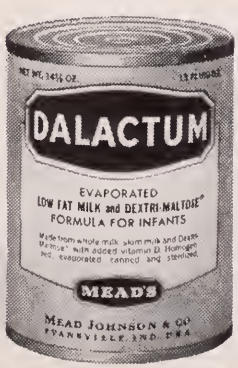
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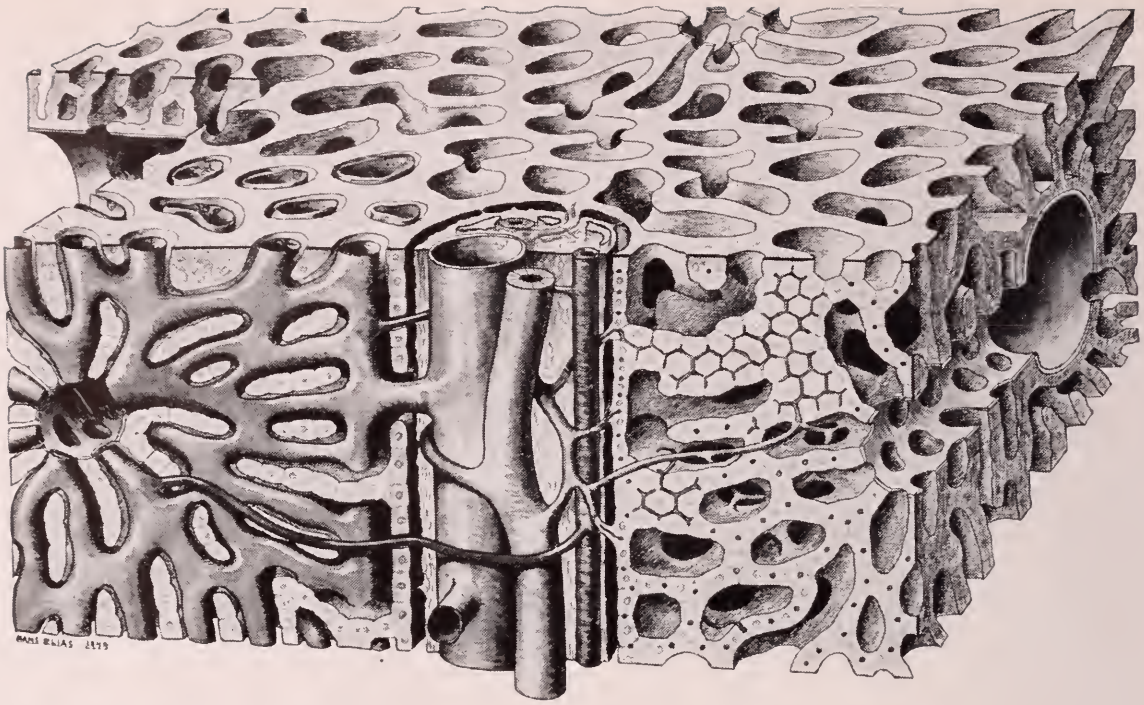
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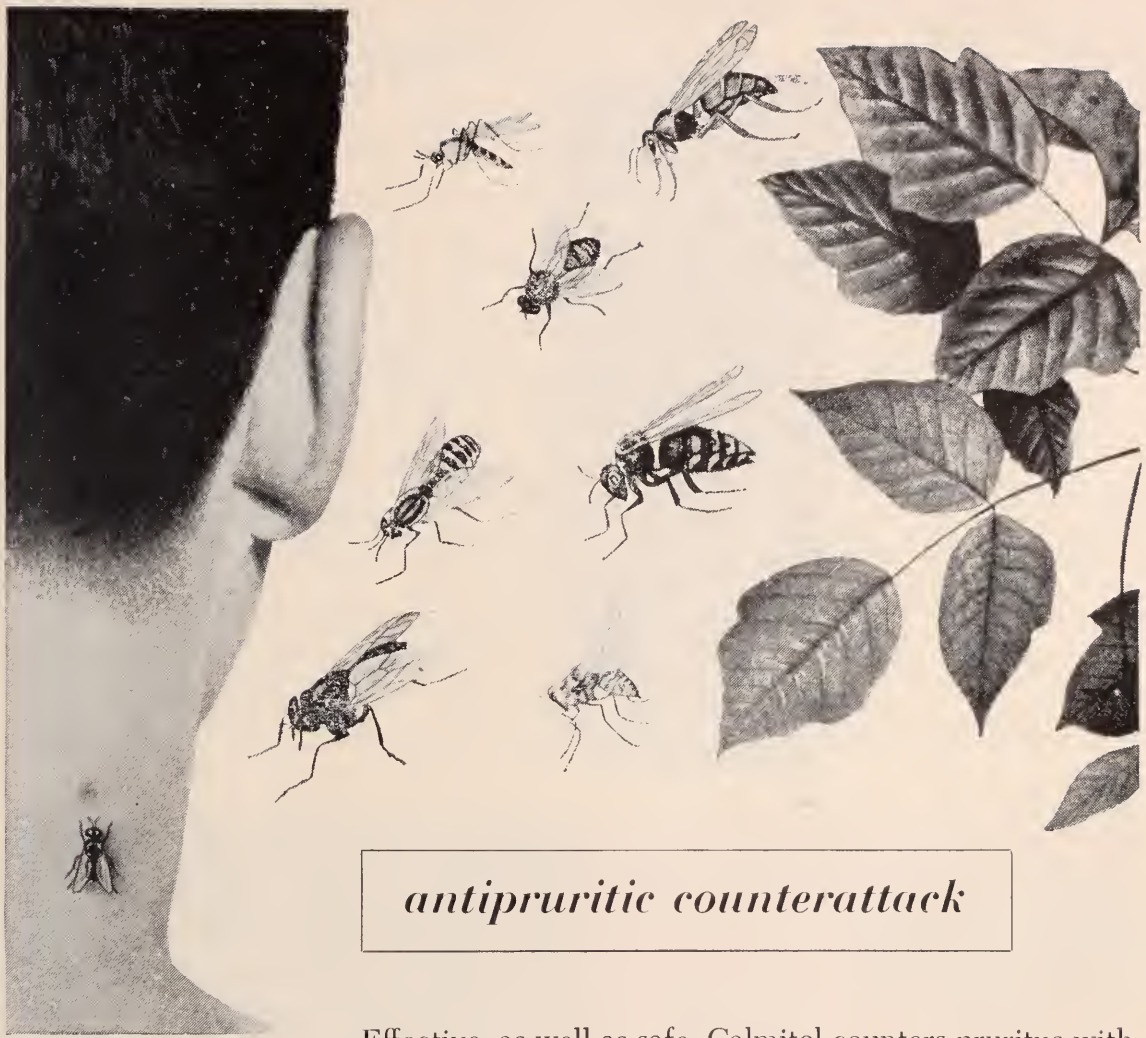


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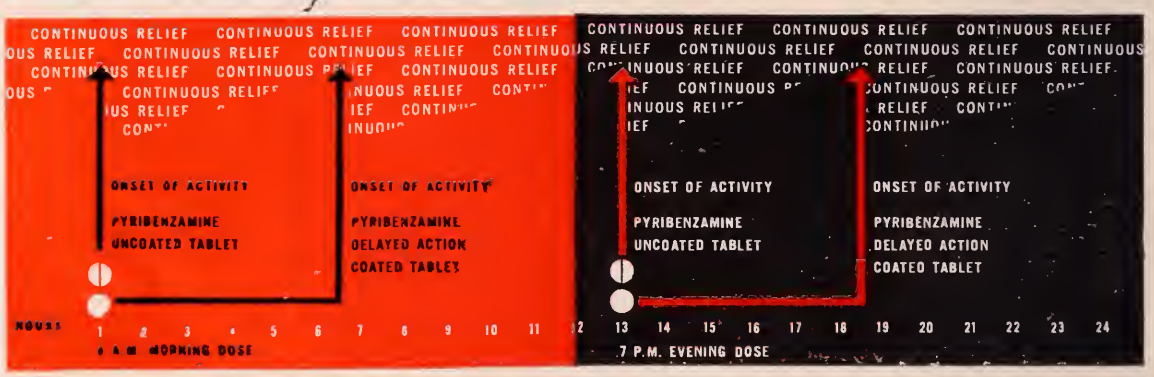
1. Lubowe, I. I.: New York State Journal of Medicine 50:1743 (July), 1950.



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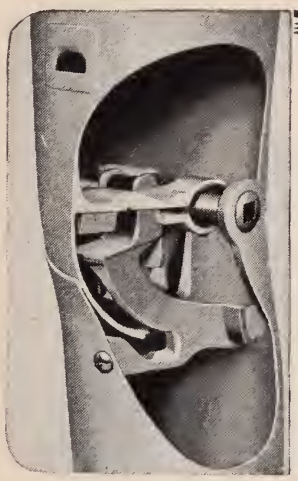
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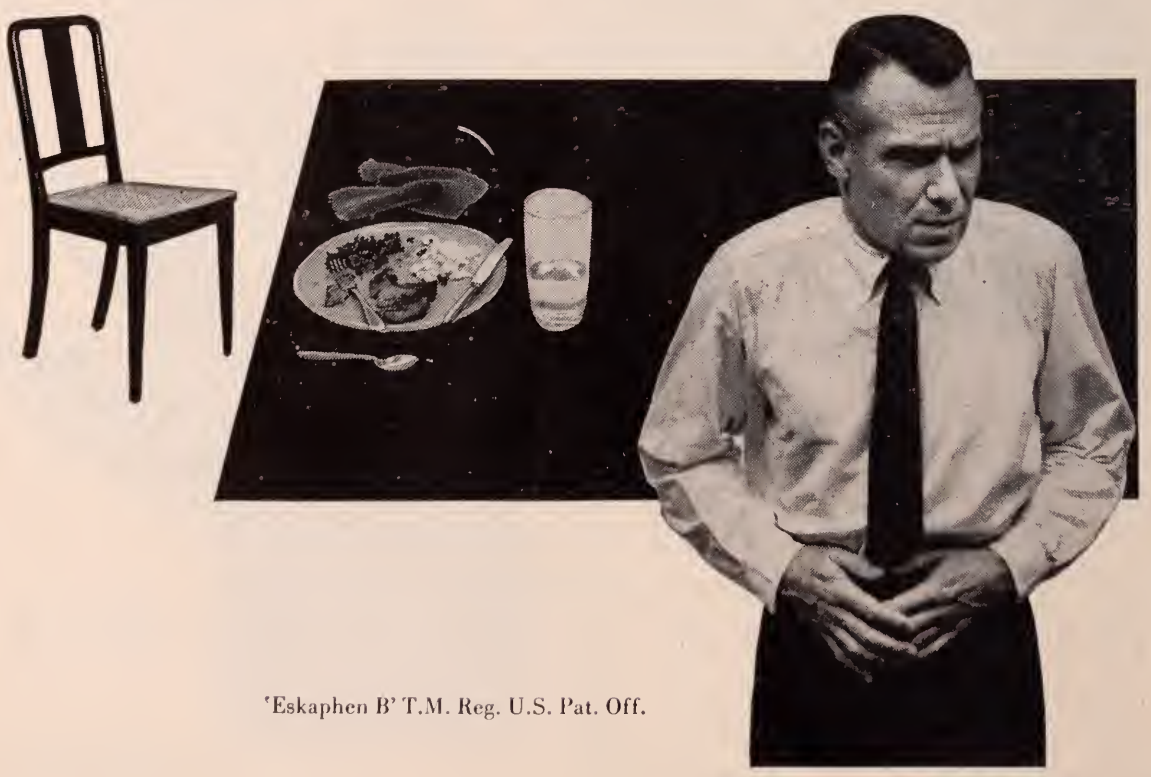
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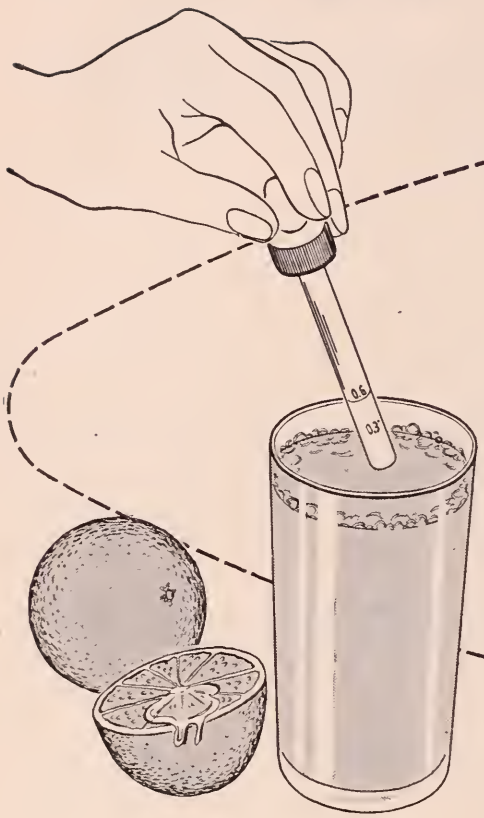
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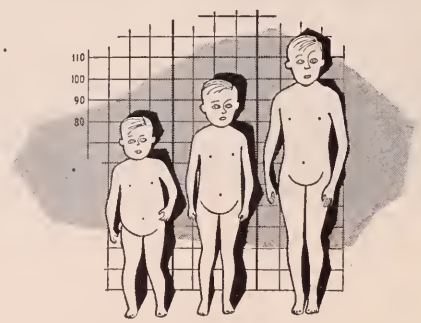
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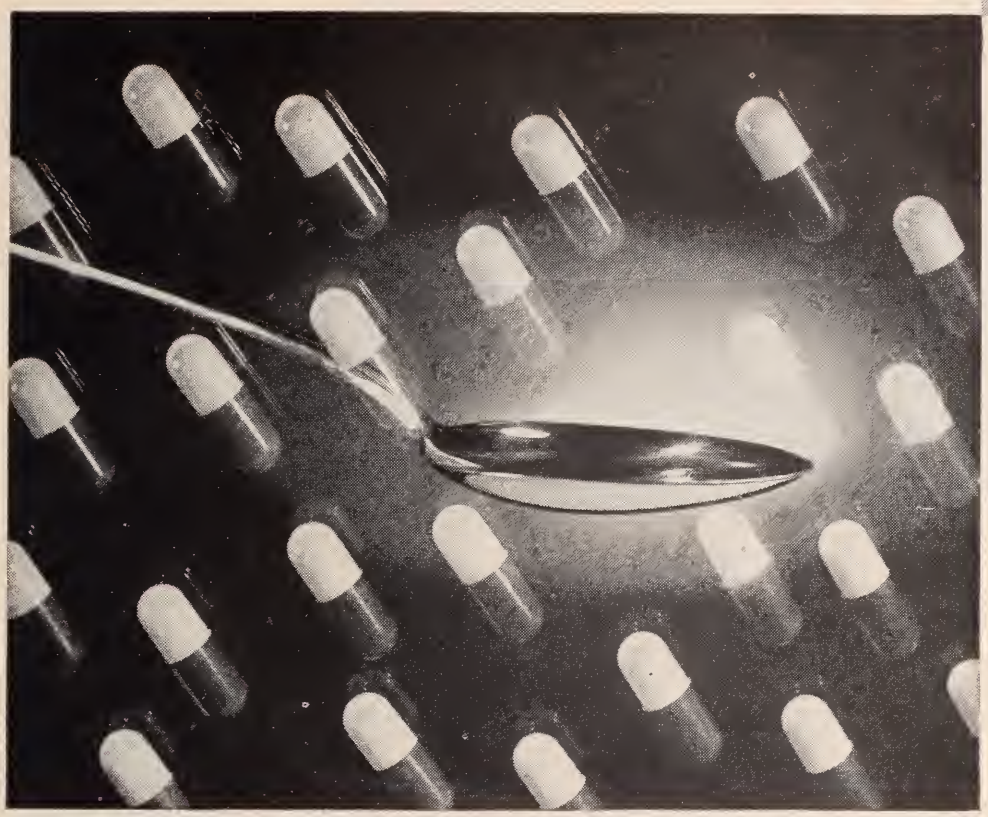
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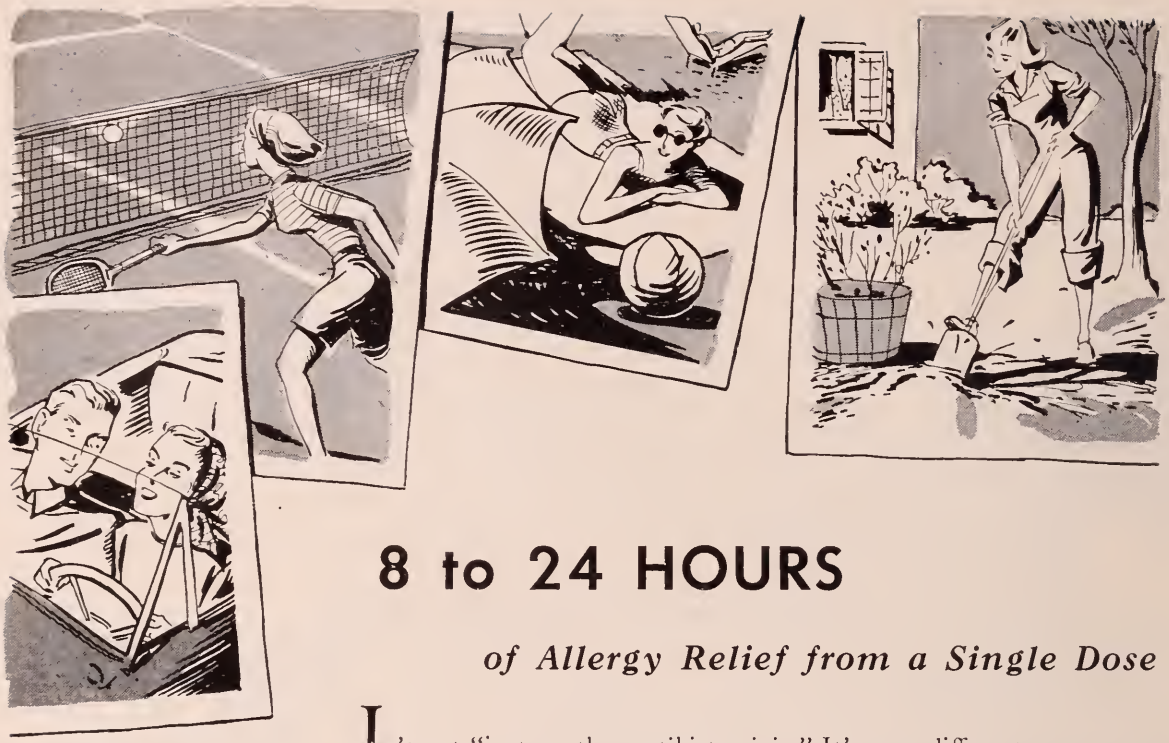
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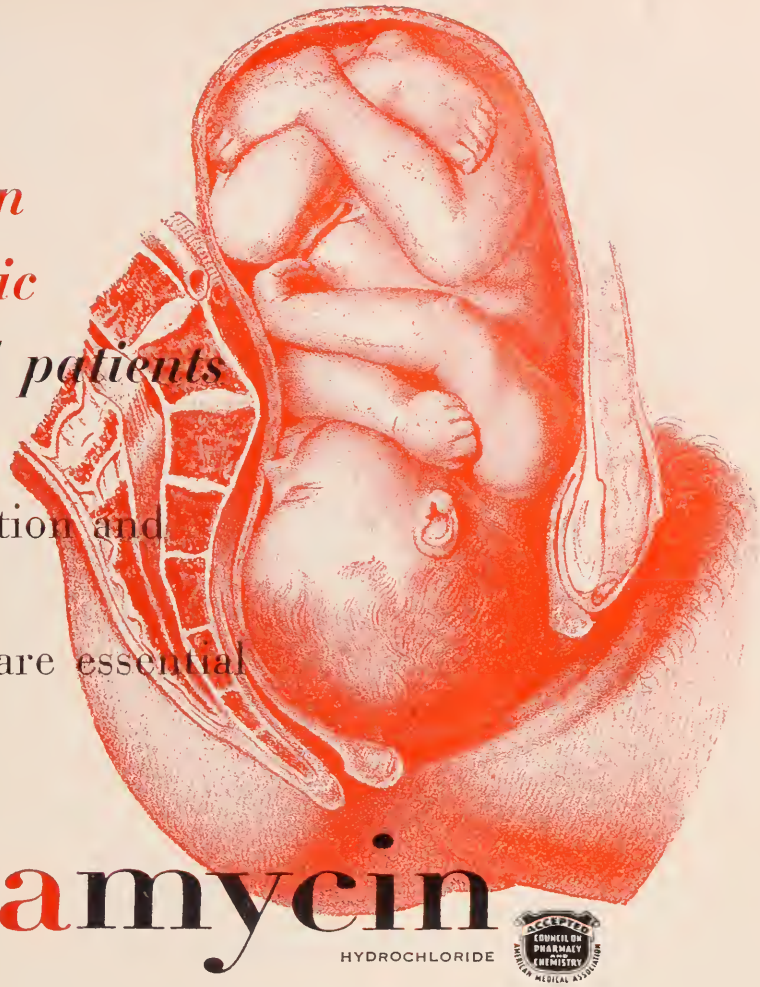
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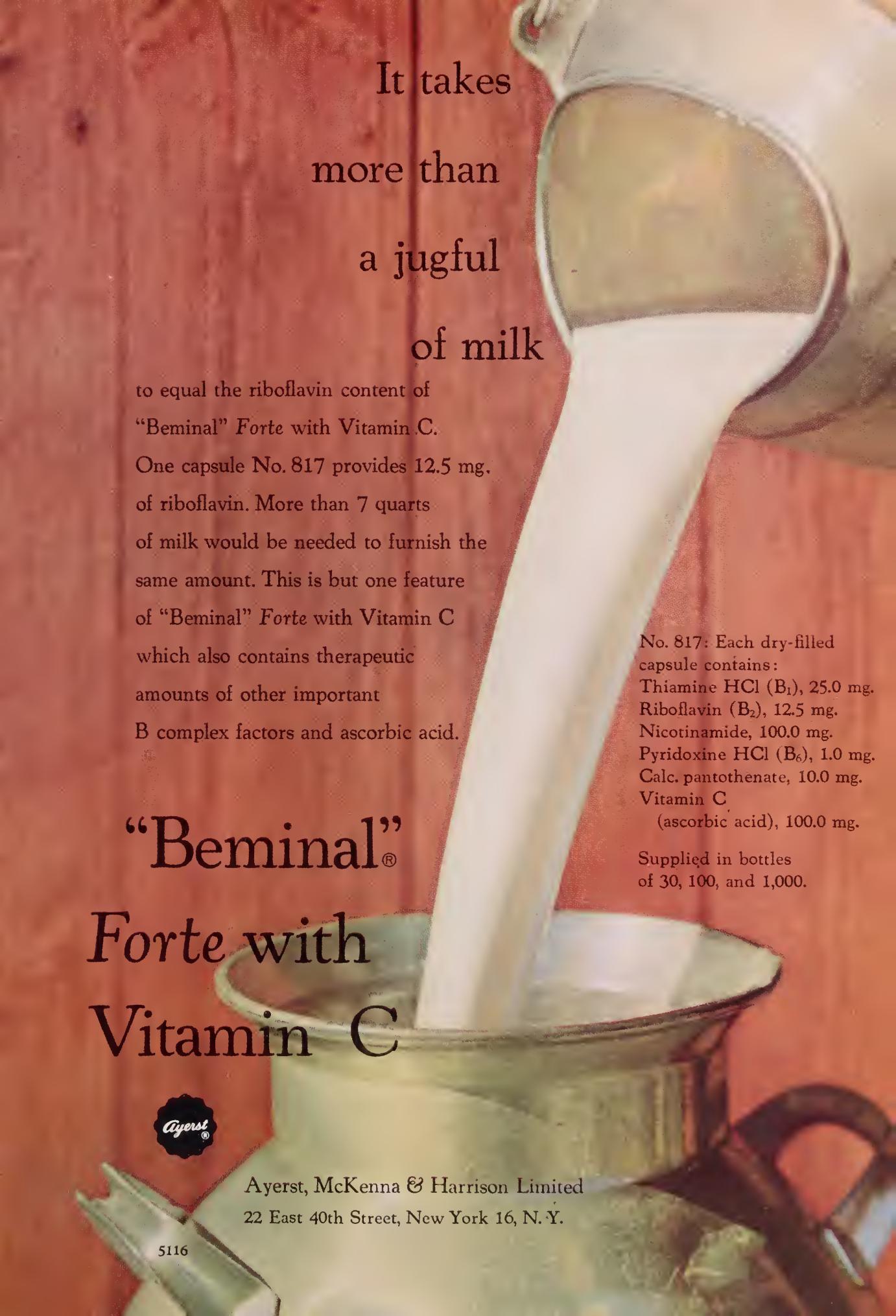
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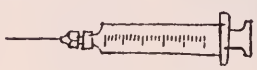
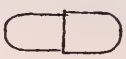
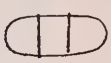
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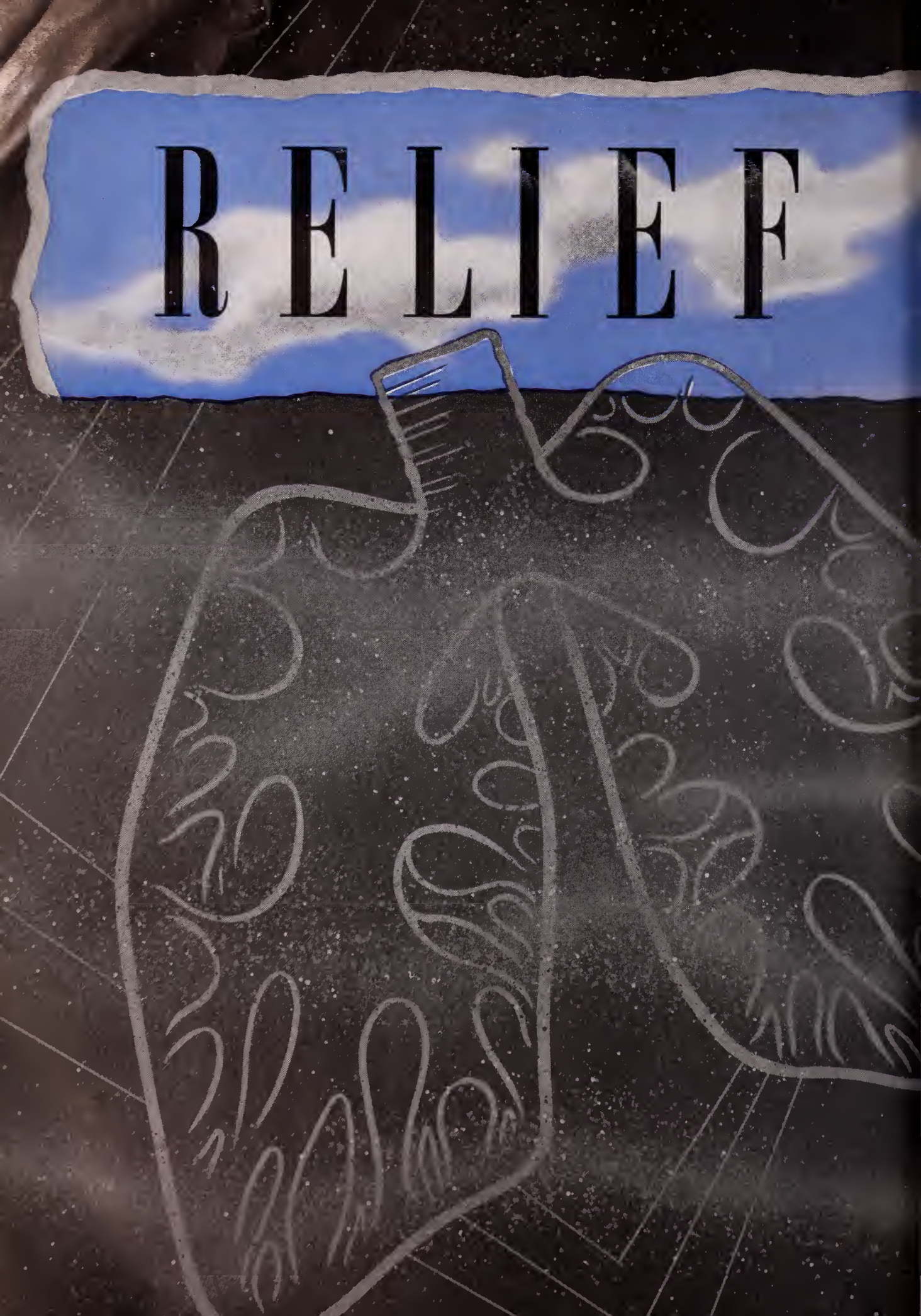
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OTHER ESTABLISHED INDICATIONS: Rheumatoid arthritis, rheumatic fever, acute lupus erythematosus, drug sensitivities, contact dermatitis, most acute inflammatory diseases of the eye, acute pemphigus, exfoliative dermatitis, ulcerative colitis, acute gouty arthritis, secondary adrenal cortical hypofunction, alcoholism and acute delirium tremens, and severe burns.

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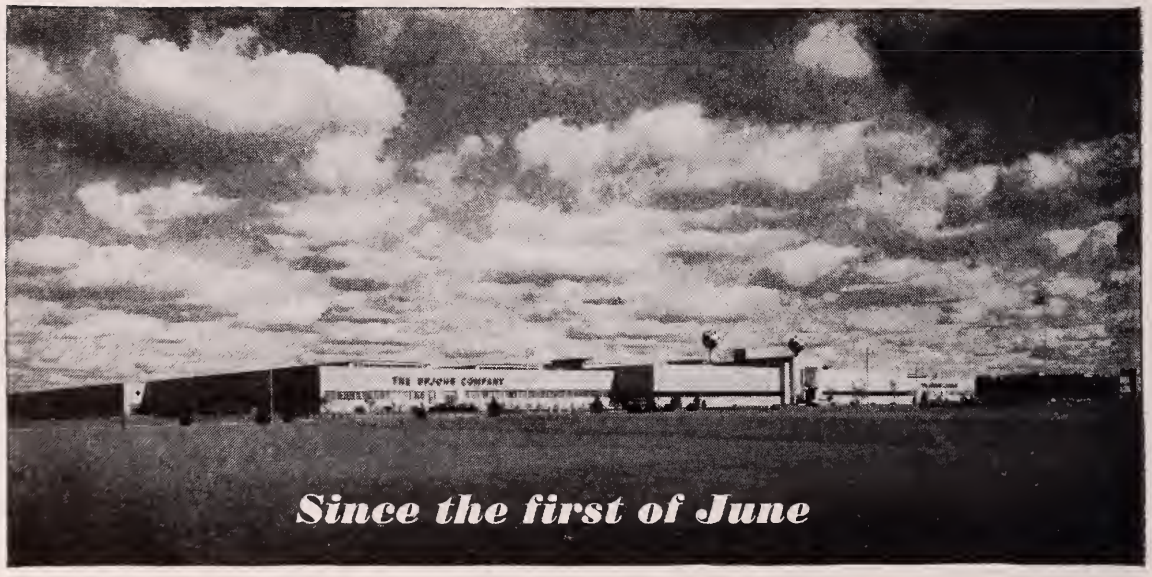
ACTHAR is available in vials of 10, 15, 25 and 40 I.U. (mg.). The Armour Standard of ACTHAR is now accepted as the International Unit, 1 International Unit being equivalent to 1 milligram of ACTHAR.

ACTHAR

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH



this new Upjohn plant has
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It is the culmination of
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predictable control of hay fever

Chlor-*Trimeton* Maleate, milligram for milligram the most potent antihistamine available, allows the physician to predict a definitive and favorable result in symptomatic control of hay fever. Often successful when others fail, and producing few and minimal side effects, Chlor-*Trimeton* Maleate may supersede other compounds designed for the same purpose.



Chlor-*Trimeton**

maleate tablets

(brand of chlorprophenpyridamine maleate)

Chlor-*Trimeton* Maleate is available in 4 mg. tablets.

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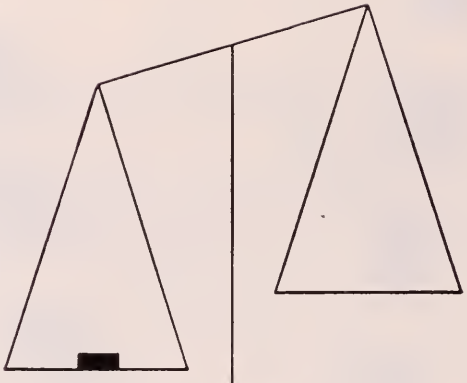
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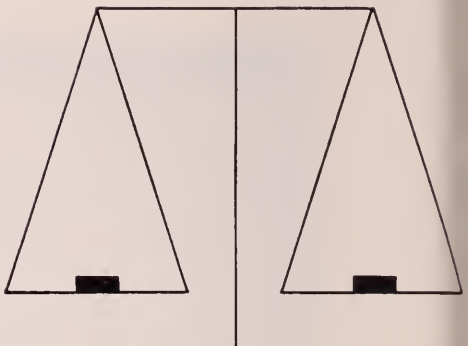
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for sodium control

not a diuretic! not a salt substitute!



Sodium imbalance causes edema



'Resodec' restores sodium balance

What it is: 'Resodec' is a remarkable new substance* that has the ability to remove excess sodium from the contents of the intestinal tract and to carry it out of the body in the feces. Hay, M.D., and Wood, J. E., Jr.: Ann. Int. Med. 33: 1139 (Nov.) 1950.

What it does: 'Resodec' produces the approximate effect of *halving* the patient's salt intake—thus assuring adequate sodium control, with a minimum of dietary restriction.

For complete details, dosage directions and contraindications, see professional literature—available upon request.

the first **positive** means of achieving

adequate sodium control in **congestive heart failure**

Smith, Kline & French Laboratories, Philadelphia

'Resodec' Trademark *Polycarboxylic cation exchange compound

A typical report* of 'Resodec' therapy in a congestive heart failure case

(average reading time: 2 minutes)

"NAME: P.R.C. CASE HISTORY No. 22851

AGE: 57 – Male

Diagnoses: Hypertensive and coronary heart disease, marked cardiac enlargement, chronic congestive heart failure, nephrosclerosis with mild renal insufficiency."

This patient "was unable to follow the basic rice diet satisfactorily, and there were frequent diversions from his diet." He had remained in "more or less chronic recurrent heart failure" since 1947 and had required "frequent injections of mercurials."

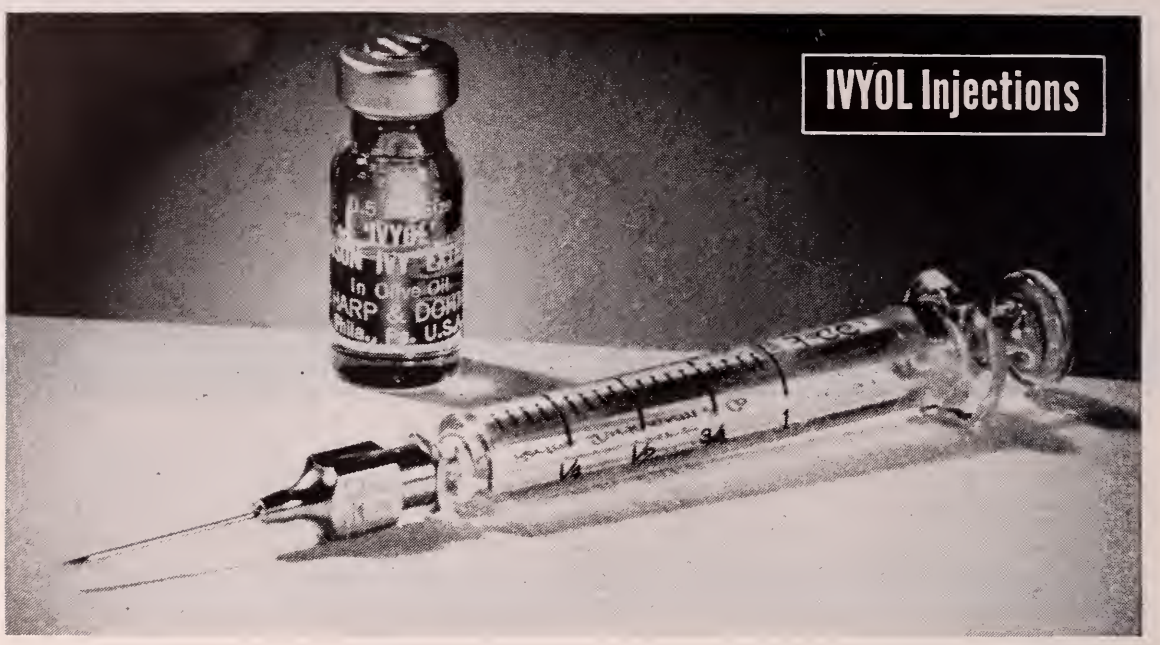
* * *

"On June 13, 1950, for the first time he was started on 'Resodec' therapy, 45 Gm. per day. There was an immediate drop in weight, and no further mercury was required until August 18. During this entire period there were weekly diversions from his diet, but in spite of this, his weight was reasonably well controlled. ...

"On September 8, it was decided to add sodium, 500 mg. in tablet form as sodium chloride. This he did by dissolving the salt in water and using it in a shaker. The addition of salt has accomplished a rather dramatic change in his outlook, since he has followed his diet consistently since that time and has gotten along very well. He has taken 'Resodec' faithfully. ...

"There is no question that 'Resodec' has been extremely effective. ... He has done extremely well ... and this would not have been possible without 'Resodec'. ..."

*Excerpts from an actual case history, as reported from a leading medical institution.



IVYOL, purified active principle of *Rhus toxicodendron* (1:1,000) in sterile olive oil; for *phylactic* as well as *prophylactic* use.

Poison-Ivy Extract Beneficial for PHYLACTIC TREATMENT of RHUS POISONING (from Poison Ivy, Poison Oak, or Poison Sumac)

IVYOL®, the same poison-ivy extract that is used so extensively for *prophylactic desensitization*, is also widely preferred for *phylactic treatment* in ivy, oak, and sumac poisoning. Reports from many sources show the advantage of using an extract that contains the active principle.

Many physicians consider IVYOL injections to be most beneficial when employed *prophylactically*—for desensitizing susceptible patients early—well before the season starts. For this purpose, four injections of 0.5 cc. each are usually given at weekly intervals, beginning in the spring—or at least early enough to complete the course of four injections before patients are liable to exposure.

Experience has shown, however, that *phylactic treatment* may also be beneficial. Treatment by injection of extracts has been reported to relieve the skin eruption and to lessen the tendency to future attacks. Favorable results obtained with IVYOL included relief from itching and inflammation. Marked improvement has occurred after a single injection.

For phylactic treatment, in average cases, one vial of IVYOL (0.5 cc.) is given intramuscularly, every 24 hours until symptoms are relieved.

In case of unusually great severity, as shown by severe or extensive eruptions from slight exposure, the amount of active principle contained in one vial, given in one dose, might aggravate the symptoms. It is advisable, therefore, in cases of this type, to begin with an initial dose of 0.1 to 0.25 cc. Subsequent doses are increased or repeated as indicated by the reaction.

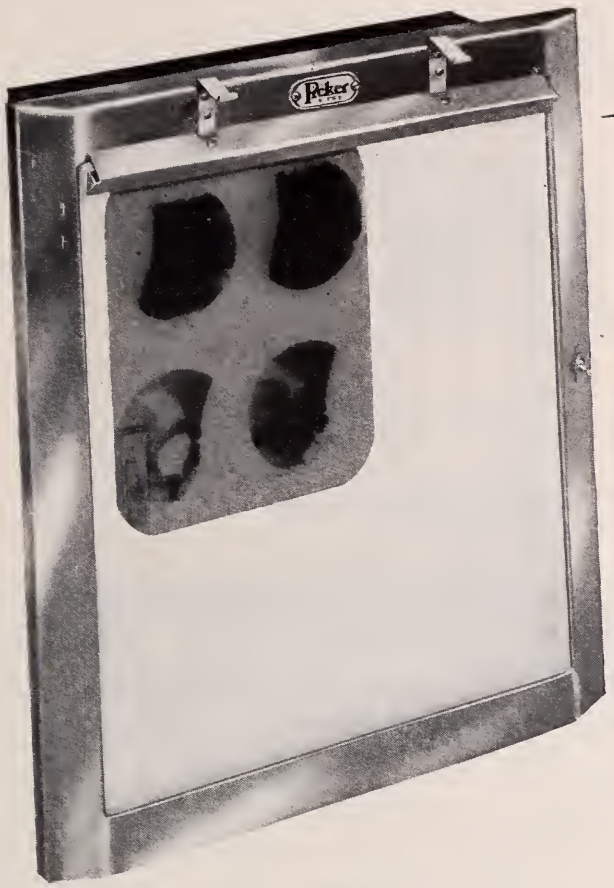
For complete information see circular accompanying product.

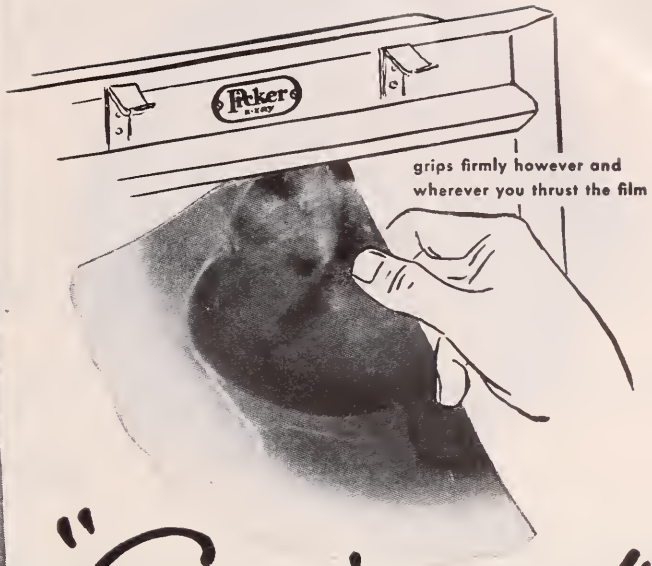
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greatest improvement in film-viewing since Picker brought out the first Fluorescent Illuminator

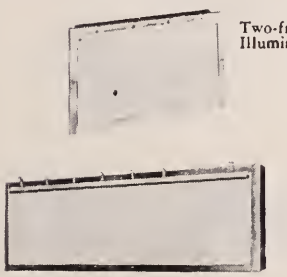
This is the new Picker "Gravity-Grip"* Illuminator—greatest improvement in x-ray film viewing since we introduced the Fluorescent Illuminator back in 1938.

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for relaxation of reflex spasm

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This Veriloid combination is another step in the direction of solving the problem of controlling the blood pressure with a minimum of nausea. Each tablet contains 2 mg. of Veriloid, 15 mg. of phenobarbital, and 10 mg. of mannitol hexanitrate. Veriloid-VPM can be taken in therapeutically beneficial amounts by most patients who exhibit low tolerance to plain Veriloid or in whom dosage regulation has proved difficult.

in all degrees of hypertension



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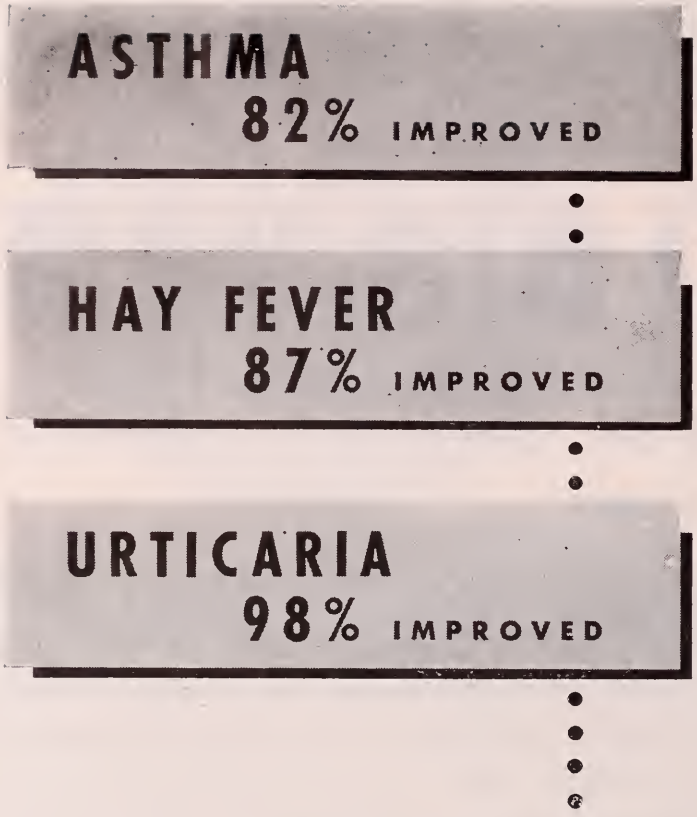
The average dose of Veriloid-VPM is one to one and one-half tablets four times daily, after meals and at bedtime. For best results, consult brochure (available on request) for details of dosage regulation.

Veriloid-VPM is supplied in bottles of 100, 500 and 1,000 scored tablets.

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HIGHLY EFFECTIVE
ANTIHISTAMINIC
well tolerated

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For relief of hyperacidity

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ALUMINA-MAGNESIUM-TRISILICATE

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Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

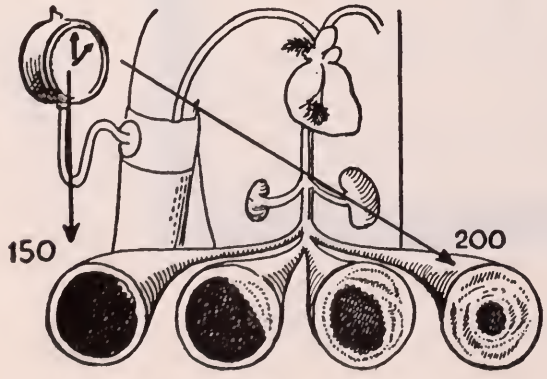
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages; diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

Phenobarbital	15 mg.
Sodium Nitrite	30 mg.
Nitroglycerin	0.25 mg.

With the equivalent of Veratrum Viride Tincture 4 minims (containing 0.1% alkaloids)

RAY-TROTE IMPROVED is effective in dosages of one capsule every three hours. It is contraindicated when renal insufficiency is present, or if pulse becomes abnormally slow following treatment.

For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

Bibliography

1. Sollmann: A Manual of Pharmacology, W. B. Saunders Co, (1942).
2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

Send for a liberal clinical supply of RAY-TROTE IMPROVED Capsules and descriptive literature today to Raymer Pharmacal Company, N.E. Cor. Jasper and Willard Streets, Philadelphia 34, Pa.

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Neo-Antergan is *available on prescription only*, and is advertised exclusively to the medical profession.

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(Brand of Pyrilamine Maleate)
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It is a well established fact that tissue cultures live and grow only in balanced electrolyte solutions. The entire human body is maintained in good health only when there is perfect electrolyte balance.

Obviously then, the precursor of many organic diseases has been found to be electrolyte imbalance.

The true physiological basis for the restoration of normal function rests with the correction of the electrolyte balance.

LACTOL - MRT *will accomplish this therapeutic effect*

SUPPLIED: Bottles of 16 fluidounces

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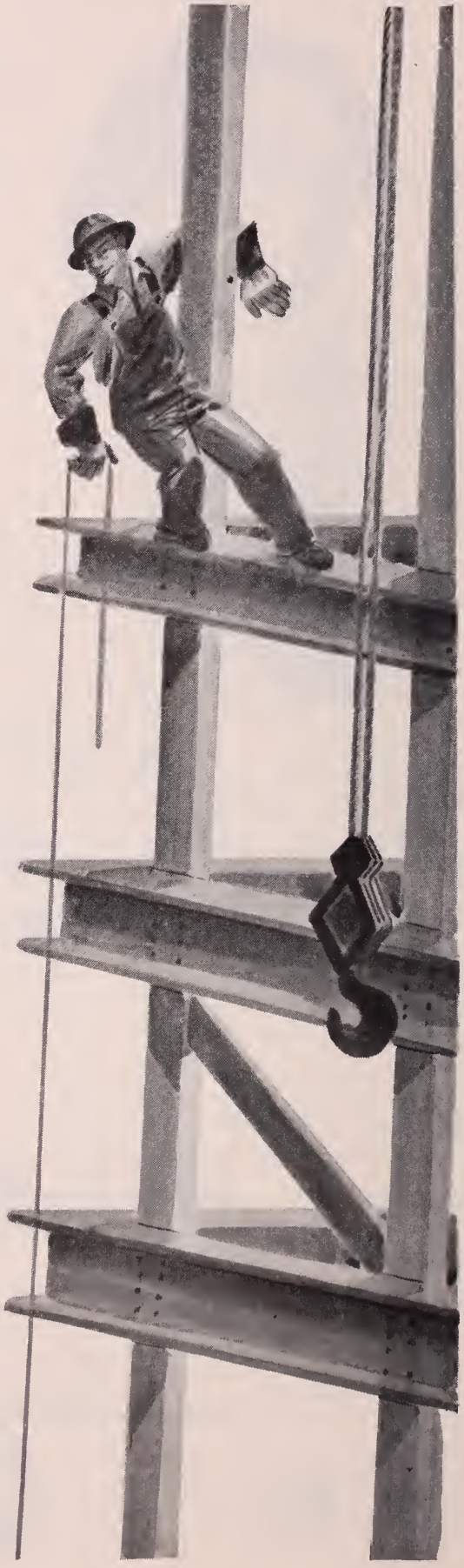
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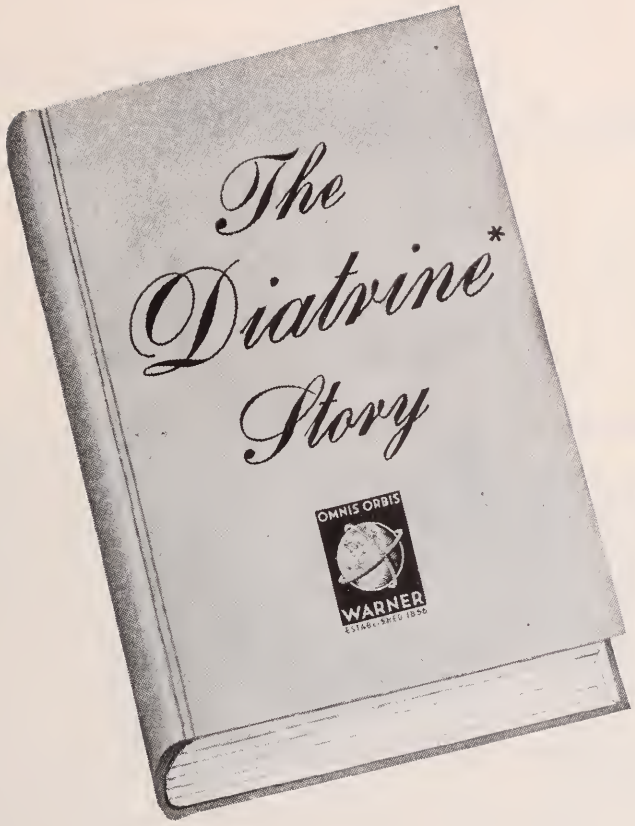
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DIATRINE* provid prompt and effective reli of allergic manifestations a wide range of allergic di orders:



Hay Fever



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REFERENCES:

1. *Combes, F. C., Zuckerman, R., and Canizares, O.: Diatrin Hydrochloride, A New Antihistaminic Agent for the Treatment of Pruritus and Allergic Dermatoses, Ann. All.,* 7:676, 1949
2. *Kugelmass, I. N.: Antihistaminic Therapy of Allergic Disorders in Infants and Children, N. Y. State J. Med.,* 49:2313, 1949
3. *Marton, S.: Diatrin, A New Antihistaminic with Minimal Side Reactions, Annals of Int. Med.,* 33:1444, 1950

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vitamin A	5000 U.S.P. Units
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ascorbic acid	50 mg.

Note: The vitamin D_3 in Aquasperse is chemically identical and biologically equivalent to the vitamin D of cod liver oil.

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The Mauve Decade was purpled by a youthful chemist named Perkin who sought to synthesize quinine but found instead the first, and quickly popular, coal-tar dye. The once-royal color became common as the nineteenth century ended and heralded a new and golden era in which chemistry was to reign. Alert to the suddenly increased significance of chemical investigation, young Josiah Lilly promptly installed an analytical laboratory in the company founded by his father just ten years before. This early Scientific Division, like today's, was to maintain standards for the control of quality and to search for the new. Readiness to make changes, to adjust to changing conditions, is the healthy response which is spurred by discovery in the free American economy. Progress is the common benefit.

A 15" x 12" reproduction of this illustration by Paul Rabut is available upon request.

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SINCE 1876

The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

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Vol. 99, No. 6 June, 1951

NEW OFFICERS ELECTED AT 1951 ANNUAL MEETING

The 1951 Annual Meeting held at the Hotel Sherman, Chicago, was well attended, there were perhaps the finest array of scientific exhibits ever shown at an annual meeting, and the meeting will go down in medical history as an outstanding one.

The second meeting of the House of Delegates, on Thursday, May 24, saw much business transacted. The following were elected at this closing session, at which C. Paul White of Kewanee, was inducted into the office of President.

President-Elect: Leo P. A. Sweeney, Chicago
1st Vice President: Fred H. Muller, Chicago
2nd Vice President: J. H. Maloney, Rockford
Secretary-Treasurer: Harold M. Camp, Monmouth

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6th District: Warner H. Newcomb, Jacksonville

9th District: Burtis E. Montgomery, Harrisburg

10th District: Willard W. Fullerton, Steeleville

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H. Kenneth Scatliff, Chicago
Fred H. Muller, Chicago
Mather Pfeiffenberger, Alton
Harlan English, Danville
Everett P. Coleman, Canton

Alternate Delegates to the A.M.A.:
Elmer McCarthy, Chicago
Eugene McEnery, Chicago
I. H. Neece, Decatur
L. S. Reavley, Sterling
E. H. Weld, Rockford

Medico-Legal Committee: (three year term)
Richard Greening, Chicago
A. L. Nickerson, Kankakee

Medical Education and Hospitals Committee: (three year term)
W. O. Thompson, Chicago

Medical Benevolence Committee: (three year term)
Robert H. Hayes, Chicago

Committee on Medical Testimony: (four year term)
John H. Gilmore, Chicago
M. T. Horsman, Salem

Grievance Committee: (three year term)
E. H. Weld, Rockford
Percy E. Hopkins, Chicago

A complete story of the 1951 annual meeting will be published in the July issue of the Illinois Medical Journal, with highlights on the highly successful annual meeting.

PRESENT EVALUATION OF ACTH AND CORTISONE

After three years of work on ACTH and cortisone many physicians have discovered that the products are not the miracle drugs which enthusiasts and newsmen have led the public to believe. They do not affect the cause of collagen diseases and in this respect are not the practical answer nor the cure for such conditions as rheumatoid arthritis. On the other hand, we cannot deny that the hormones have been the most potent agent we have found to combat these diseases. It is interesting to note that the original claims made by Hench and his co-workers at the Mayo clinic still stand as stated.

The practical value of a remedy is measured by comparing its advantages and disadvantages. There is one advantage to the new hormones; In simple language, "it works." This single advantage outweighs the dozen or more disadvantages. The daily administration of cortisone and/or ACTH leads to dramatic improvement in most cases of rheumatoid arthritis, rheumatic fever, status asthmaticus and many other related conditions. It gives disabled individuals a chance to live and work by relieving pain, swelling, and discomfort. They feel better, eat better, and usually regain lost weight. Our patients ask for no more except that the treatmest be safe and no worse than the original disease.

It is here that the disadvantages enter the picture. The main drawback is that the symptoms are likely to return when the administration of the drugs is discontinued. This means that many individuals must use the products over a long period of time and since the drugs are expensive and our taxes high, it is difficult for the average family to support such a regime. But we can pass off this disadvantage by looking forward to the time when the price will come down or we learn to control symptomatology with smaller doses.

But ACTH and cortisone are active hormones and as such are capable of producing symptoms of their own. These are included frequently under the heading of reactions and occur generally in direct proportion to the care with which the substances are administered. The substances alter sodium and potassium metabolism, but by checking the intake and output twice a week and insisting on daily weighing the problems associated with edema or sodium retention are avoided. Through frequent examinations the physician also is able to detect the moon shaped face, hirsutism, beginning acne, loss of scalp hair and pigmentation of the nails and skin. These are signs that all is not well. An increase in fasting blood sugar is not unusual and now and then frank diabetes mellitus occurs. Euphoria is not necessarily a disadvantage but it must be given more serious attention when it approaches the stage of being a hypermania. A definite depression occurs occasionally, especially in those who were emotionally unstable to begin with. But these disadvantages are not common (10 per cent) and usually correct themselves soon after the drug is discontinued.

More serious reactions may follow the long continued administration of these hormones. ACTH, for example, produces hypertrophy of the adrenal cortex with all the signs of hyperadrenalism. The continued use of cortisone has the opposite effect with atrophy of the adrenal gland. These occurrences were anticipated inasmuch as ACTH stimulates the adrenal and cortisone is replacement therapy.

ACTH and Cortisone cannot be used for every disease process encountered by the practising physician. It must be used cautiously in treating active infections. It does not kill the virus nor other microorganisms. It does not effect their growth and there is some evidence that it suppresses antibody formation. This can be serious, especially when the drug is stopped. There are numerous examples in which the disease came back with vengeance after discontinuing treatment. One authority noted that patients receiving ACTH and cortisone were more susceptible to colds while taking the hormones. Suppression of antibody formation probably is responsible, although studies of this nature should be carried out over many seasons before arriving at definite conclusions.

THE PREVENTIVE USE OF ANTI-INFECTIOUS AGENTS

"Prevention is the daughter of intelligence."
Walter Raleigh.

Since the introduction of the sulfonamide drugs nearly sixteen years ago, great progress has been made in the discovery of therapeutic agents capable of inhibiting or destroying the various types of organisms concerned in the



C. Paul White, M.D.

President, Illinois State Medical Society

1951-1952

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chairman, John R. Wolff, Co-Chairman, Edwin F. Hirsch, Carroll Birch, Hubert L. Allen, Frederick W. Slobe, Edward W. Cannady, Ford K. Hick, W. Robert Maloney, Roland R. Cross, Alfred P. Bay, Frederic T. Jung.



State Hospital Service as a Career for the Physician

The young physician just completing his internship is beset with economic pressures which in some measure influence his choice of action. Need for further training usually competes — with the desire for acquisition of a home, family, equipment and practice — for possession of the doctor's financial resources.

Service in an Illinois State Hospital is a peculiarly satisfactory bridge over this period of low financial reserve.

It offers income beyond immediate need, in addition providing maintenance for self and family at a "token" cost. There are many hidden benefits included in State Hospital maintenance which are often overlooked. Room, board, and laundry obviously means also, furniture, linens, utensils and the like. But also it means no shopping, no garbage disposal, no housework, no furnace tending, no utility charges, no yard care, no repairs, no loss of travel time between home and office etc.

It provides a substantial amount of leisure time in that the hours of employment are regular and time off is not encumbered. Vacation and holidays combine with weekly days off duty to give the physician seventy-five days off annually. Provision is made for sick time and medical service to both the physician and his dependents, as they may be needed.

Ample opportunities are provided for the physician in State Hospital Service to advance his professional development and training if he so desires. Through clinical pathological conferences, journal club meetings, daily staff conferences and seminars, he is stimulated to add to his fund of medical knowledge. The availability of a medical library on the premises is a resource beyond realization of most physicians not in State Service.

Although most of the requirements for certification in the specialty of neuropsychiatry may be met while in residence in a State hospital, it should not be overlooked that all other specialties are practiced among the 40,000 patients served in these hospitals. All State hospitals have the services of qualified consultants in the medical specialties and herein exists the opportunity for the young physician to work under the

guidance of a mature preceptor. The patients, while mentally ill, are of course subject to the natural incidence of medical, surgical, orthopedic, pediatric, gynecological, dermatological and other ailments. An additional advantage of this type of practice is the fact that in a controlled environment, treatment conditions are more easily imposed than where they are dependent upon the patient's own desire to cooperate.

Allowances of time are made for the physician who establishes research associations either at the hospital or with neighboring medical institutions. Similar allowances are made for those who secure teaching affiliations. Substantial leaves of absence with pay are provided for training purposes to those physicians who have completed three or more years of service. Additional time is allowed for maintenance of professional society contacts, and attendance at medical meetings.

Many physicians have availed themselves of the advantages above enumerated and gone on to pursue successful careers elsewhere. Adolph Meyer and Frederick Tice head a list of illustrious "graduates" of the Illinois State Hospital system. A glance down the current roster of only one national professional organization yields the names of forty former Illinois State Hospital physicians now successfully engaged in private practice in Illinois.

For the smaller number of physicians who may choose to remain in the service of the State, other advantages are reserved. A retirement benefit plan exists for those who complete fifteen years of service. A career either in clinical direction or in hospital administration is possible. Nine of the eleven Illinois State Hospital superintendents rose to their present positions from the ranks of State Hospital physicians.

Finally, State Hospital practice is culturally stimulating, since responsibility for treatment of the patient as a complete cultural unit necessarily creates an awareness of environmental factors other than those concerned with disease, per se.

Physicians, in the spring of their professional lives, would do well to investigate the possibilities of a period of State service and to give consideration to the benefits to be derived from such an experience.—A. P. B.

THE CHANGING WORLD

It is difficult for us to realize and visualize the revolutionary changes which have taken place in business and professional circles in the past few years. . . The following statistics, which were released by Ralph Brubaker of the Los Angeles Sales Executive Club, indicate the reason for the rapid changes in the thinking of the average citizen during the past ten years and show the necessity of setting our sights on a much higher level:

Since 1940

(1) 13½ million old customers have died;

(2) Over 17 million marriages have taken place;

(3) Over 30 million babies have been born;

(4) Over one-third of all present families in the United States have been formed;

(5) Out of the 140 odd million people in the United States today, 63 per cent do not remember World War I;

(6) Fifty-two per cent do not remember a Republican administration in the White House;

(7) Forty-eight per cent do not remember what conditions were like before World War II;

(8) Forty-four per cent are consciously experiencing for the first time a free market in which they can buy what they want from normal assortments. *Excerpt: Weighed in the Balance, Hamilton W. McKay, M.D., Charlotte, N.C., J.I.S.M.A., March, 1951.*

CORRESPONDENCE



"YOUR MENTAL HOSPITALS" NEW ILLINOIS MENTAL HEALTH CODE

The current session of the Illinois Legislature is considering a new law for the admission, care and treatment of the mentally ill and the mentally deficient. This new bill under the sponsorship of Representative Bernice Van der Vries and Samuel Shapiro codifies the existing laws. It combines the Revised Mental Health Act of 1945 and the Mental Deficiency Law of 1949. In many aspects, the new bill retains many of the features of the current laws including commitment, admission and hospitalization procedures. This bill repeals the 1947 law for commitment of epilepities, as it is felt that epileptics requiring institutionalization would classify either as mentally ill or mentally deficient.

The proposed Mental Health Code was drafted after months of study by a committee representing the Illinois Psychiatric Society, the Illinois State Medical Society, the Illinois Society for Mental Hygiene, The County and Probate Judges' Association, the Illinois State's Attorneys' Association, The Civil Liberties Committee of the State Bar Association, the Veterans' Administration, the American Civil Liberty Union, Cook County Psychopathic Hospital, Superintendents of Private Sanitaria, Illinois Board of Public Welfare Commissioners and the Illinois Department of Public Welfare. Representatives Van der Vries and Shapiro and Senators Saltiel and Adesko participated actively in the development of this proposed legislation.

The purpose of the New Mental Health Code is as follows: —

1. *Unification and Clarification of Existing Statutes.*

This new law would combine two existing statutes, omitting those items related to criminal law and eliminating statutory procedures which have not proven satisfactory. The revised statutes would conform more closely with present day medical concepts. Terminology and language and especially terms with penal connotation, are elimination in favor of more acceptable language. The current existing laws replace the terms insane, feebleminded and asylum with terminology as mentally ill, mentally deficient and mental hospitals. The proposed code, in keeping with present concepts and desire to further remove stigma, eliminates other terms such as "unsoundness of mind" and "apprehended as dangerous to self or others", etc.

2. *Admission to Hospital*

As in the present laws, a person may enter a State mental hospital as a voluntary admission, emergency admission, or by being committed as mentally ill or mentally deficient. In addition to the above method of admission, a person may enter a private sanitaria or a psychiatric unit of a general hospital without any legal formality, provided he is not retained therein contrary to his wishes. The New Code would authorize the

court to determine at time of commitment, if immediate admission was necessary. When immediate admission was not necessary, the committed patient would be placed on a waiting list to be accepted as soon as possible. With the State mental hospitals caring for 17,000 patients above their authorized building capacities, this procedure would be very helpful.

3. *Payment for Hospital Care*

Practically every State in the Union has Statutes authorizing payment for hospitalization of the mental patient. Illinois is the rare exception and is one of the few states that does not authorize this payment. The annual cost for caring for the 45,000 patients in the Illinois State Mental Hospitals amounts to nearly thirty-six million dollars. This figure does not include the annual cost for rehabilitation of the thousand or more buildings nor the new annual construction which has avaraged ten million dollars annually. With the mounting cost it is necessary to charge for hospital care. Under the new code, based on per capita cost, charges would be pro rated depending upon the ability of the individual to pay. Many families would not be able to make any payments. Collections would be made by a Departmental agency completely separated from the institution. The funds would be used for research, improved treatment, service and care of patients.

4. *Transfer of Patients*

The Department of Public Welfare would be authorized to transfer patients between its institutions when it would be to the patients' advantage. Under the present laws a patient may be committed by the courts to the institutions at Lincoln or Dixon as mentally deficient. If examination at the hospital, by the medical staff, revealed the patient to be psychotic or mentally ill, it is necessary to take this patient back to the courts, having him discharged as not being mentally deficient and then recommitted by the court as mentally ill. Under the new code the Department of Public Welfare could issue an order transferring the patient to the type of hospital in which he classified.

The Department would also be authorized to carry on negotiations with other states on patient transfers and to provide for inter-state movement of nonresident patients.

It is necessary to progress and advance mental health legislation in keeping with the progress and advances being made in the field of medicine. The Illinois Legislators have each session since 1943 passed legislation improving the laws pertaining to the mentally ill, the mentally deficient, the epileptic and the postencephalitic.

C. A. Wiltrakis, M.D.
Deputy Director

ILLINOIS STATE TRAINING SCHOOL FOR BOYS NEEDS FULL TIME PHYSICIAN

The institution has an average population of 450 boys and there are approximately 300 employees. Complete medical service is provided the boys but only emergency medical care to the employees. Since there are approximately 600 boys admitted each year and an equal amount of discharges there would be an annual approximate total of 1200 physical examinations for boys coming in or going out. Then there is in addition the provision of such medical care as is needed while the boys are in the institution. We have a 25-bed hospital which is at present undergoing remodeling to make it into a much more efficient unit. One new addition will be that of x-ray equipment. Only minor surgery is performed at this hospital since we have such resources as Illinois Research Hospital, Illinois Eye & Ear Infirmary and the Elgin State Hospital to call upon. A considerable amount of our laboratory work is done at Elgin State Hospital.

The purpose of the institution is to help rehabilitate delinquent youth and since we believe that this can best be done through a mental hygiene approach it is our desire to wholly eliminate the punitive aspects that were commonly associated with training school programs heretofore.

This position has a Physician II classification with the State Civil Service Commission. The present salary range is $395-$534 per month. Maintenance, including board, room and laundry is available at a cost of $50 per month. Present quarters are inadequate for dependents although it is planned to rectify this situation in the future. We do, however, have adequate accommodations for a single person, or temporarily, for a couple. In all probability the Legislature, now in session, will substantially increase the salary range. The starting salary would not necessarily be the

minimum of the range but would depend upon the qualifications presented.

Although we would like to have any prospective applicants referred directly to us it is suggested that they first arrange to see Dr. Hletko or Dr. Burat, State Department of Public Welfare, 160 North LaSalle Street, Chicago. Their telephone number in Financial 6-2000, extension 626.

Clinic Director
Casper Wolhowe,

MEDICAL HISTORY DATA WANTED

At the recent meeting (April 24) of the Committee on Medical History of the Illinois State Medical Society, I was designated to write two of the approximately thirty chapters for Volume 2 of the *History of Medical Practice In Illinois,* which is now in preparation and which is designed to cover the period between 1850 and 1900.

One of these chapters deals with the "History of Medical Libraries" and the other with "Anatomy in Illinois." Since the information and source material, on which these chapters are to be based, must be as complete and exhaustive as possible, I need all the help I can get in gathering references, documents, personal experiences, pictures, letters, reports, etc. bearing on these subjects, especially during the period indicated. For example, in regard to the history of medical libraries, the story of significant private collections of medical books, and of the personalities behind them, may be quite as interesting as the founding and growth of the public libraries of medical schools, hospitals and societies. Similarly, in reference to the chapter on "Anatomy in Illinois," any information pertaining to "grave-robbing" or "body-snatching", legal obstacles, authentic episodes, methods of presenting anatomy, significant contributions to the science of anatomy, and such data, during the half-century stated, will be of historical interest. Pertinent information, so received, will be gratefully acknowledged in the ensuing publication.

Otto F. Kampmeier, Ph.D., M.D.
Professor of Anatomy and
Head of the Department,
College of Medicine, University
of Illinois, Chicago

CHICAGO PEDIATRIC SOCIETY WINNERS

The Chicago Pediatric Society held its third annual Resident's Competition on April 17th, 1951. The winners were as follows: —

Tied for First Place — Dr. Howard S. Traisman, who wrote on The Use of Desoxycorticosterone Acetate in Dehydration and Malnutrition in Infancy, and Dr. Elmer R. Kadison with a paper on The Treatment of Infantile Diarrhea with a New Combination of Antibiotics.

Third Place went to Dr. C. R. Castaldi. His subject was Acute Infectious Gingivo-Stomatitis (Herpetic Stomatitis) and its Response to Oral Administration of Aureomycin.

COURSE IN POSTGRADUATE GASTROENTEROLOGY

The National Gastroenterological Association announces that its course in Postgraduate Gastroenterology will be given at the Drake in Chicago, Illinois on September 20, 21, 22, 1951.

This year the course will again be under the direction and co-chairmanship of Dr. Owen H. Wangensteen, Professor of Surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator and Dr. I Snapper, Director of Medical Education of The Mt. Sinai Hospital, N. Y., N. Y., who will serve as medical co-ordinator.

For further information and enrollment write the the National Gastroenterological Association, Department GSJ, 1819 Broadway, New York 23, New York.

MICHAEL REESE POSTGRADUATE COURSES

The Michael Reese Hospital Postgraduate School is offering a two-week course in "Diseases of the Endocrines — Physiology and Diagnostic Methods". This full-time intensive course will meet from July 9th to July 21st, 1951.

A full-time intensive course in "Hematologic Diagnosis", under the direction of Dr. Karl Singer from July 23rd to August 4th, 1951. This two-week course offers a review of the present status of hematology and instruction in actual reading of slides of normal and pathological specimens of peripheral blood and bone marrow. For further information, on either course address: Dr. Samuel Soskin, Dean, 29th St. & Ellis Ave., Chicago 16, Ill.

ORIGINAL ARTICLES



Faith

The Presidential Address

Harry M. Hedge, M.D.
Chicago

Shakespeare in his Julius Ceasar speaks plainly when he says: "There are no tricks in plain and simple Faith." And this is the thought for which I plead in this short address. Lest I might be accused of attempting to preach a sermon rather than give a Presidential Address let me say that the momentous occurrences of the past year have impressed us with some facts about the doctors. Until eighteen months ago, doctors were thought to be a group of well educated, well meaning individuals pursuing their various activities with energy and some success, but who had little influence in that great factor of our national economy called politics. Nor even today do they wish to enter partisan politics or to seek the defeat or election of any candidate, but rather to use their influence by standing on a publicly announced platform of right and free enterprise, unhampered by the collectivist state or centralized regimentation. Since the days of Valley Forge there has been no period in our national history, including the period of our great civil strife, when our faith as a nation and as individuals sank to such a low ebb as it did in 1949, 1950 and 1951. Personal gain, personal aggrandizement, party favor, selfish intrigue and collective bargaining for undeserved favor were practiced and sought as a common end.

Medically this lack of faith began to be seen as a causative factor of the diseased state in our clinics and in the medical practitioner's office by causing new forms of diseases and emphasizing certain phases of already established disease clearly indicating as one of the causes, nerve fatigue and derangement. Diseases which under ordinary conditions would yield readily to established forms of therapy became more and more resistant and in many instances ended in a state with recovery almost impossible.

Probably our best example of personalized faith is the country practitioner who, in the eyes of many millions, is the embodiment of the highest attributes in human endeavor. This man

Presented before the Illinois State Medical Society on May 23, 1951, Chicago.

has stood for generations as the great bulwark of humanity and has personified a living, human being with understanding, sympathy, intelligence, character and action. That great group of people who constitute the basis of our nation looked to this man in admiration and often almost in worship. Then the insidious invasion into his domain began by those rapacious followers of selfishness who sought their own profit by trying to debunk and deglorify not only this country medical practitioner but the entire medical profession as well.

We must all of us remember, however, that there were and still are weak points and weak characters in our organizational fabric which cannot be overlooked and which must be corrected. Little faith would we have in the silver dollar — even if it bore the motto, "In God We Trust" — unless it were made of the prescribed 900 fine silver and had been minted to contain 412.5 grains of the white metal. A lead dollar that can be bent and broken, regardless of how faithful are its face markings, is a counterfeit and is worth only the time to cast it into the waste basket or drop in over the bridge into the depths of the river. So our faith must be a two-way reaction. It must be visible as we look from our side to that of the other and the true image must be a reflection that comes back to us from our adversary or opponent. In other words, our faith must be in ourselves as well as our fellowmen and must be based upon that intrinsic value both of ourselves and of those we trust.

At one time when I was being questioned by a postgraduate Board as to a product I was using in a piece of research one of my interrogators said, "How do you know that you are getting the results because of the use of this material? How do you know that it is this material that you are using?" The only response that could be made was that the material came from a reputable pharmaceutical house and it bore their label saying it contained this material. It was faith. And here this faith had been extended to one of our own profession, the pharmacist who had supplied the material. To go still further, we must extend this same brand of faith to the dentist who gave us the green light to proceed with our patient as the oral condition passed his scrutiny, and again to the nurse who records the daily progress of the one who is ill, or to the conferee who by his experience quickly sees things for which we may not even look, and in no less a degree to the Press who so willingly cooperate with us to make known to the world our needs and our desires as well as at times our opposition to damaging public opinion when such opinion stems from the belief that might may assume the roll of right.

This interdependence calls for a great amount of faith and that faith must be founded upon rock solid foundations of character and integrity. We must abandon all prejudices and preformed opinions, retaining an open mind which, as physicians, we have trained properly to evaluate truth and fact in an honest manner. It matters not what race we claim: whether we are black or white, Catholic or Protestant, Jew or Gentile, Asiatic or Caucasian, we must ever place our faith in a man as a man and let it stand for what he really maintains as his philosophy of life.

Lowell says in his volume entitled "Among My Books": "The only faith that wears well and holds its color in all weathers, is that which is woven of conviction and set with the sharp mordant of experience." Do we as citizens still feel that strength of conviction and responsibility for those enterprises we sponsor in our form of free government and thus share in its benefits, or do we fail to hold them in serious enough portent to be willing to sit in quiet for a few moments while we think these problems through? All too frequently, I fear, we seek a morning editorial, the advice of a friend or even some radio commentator to give us our solutions and set of opinions. We still need that faith referred to by James Russell Lowell "which is woven of conviction and set with the sharp mordant of experience." Must we be confused in our rightful opinions and weighed conclusions just because one who is in authority or who has been accredited with popular acclaim for some previous accomplishment leads us astray in our thinking and unbalances our better judgments regarding unproven products or untried cure-alls? We are prone to take his word as law, his opinion as that of authority and, as a result, trudge along a side road for many a weary scientific mile before we come to the realization that had we but thought things

through for ourselves, we would not have been thus easily misled. How can we have faith in this type of leadership when we know that they themselves do not possess the 412.5 grains of pure metal in their scientific make-up? When by such processes we lose faith in an occasional leader, we very naturally also may lose faith in a much larger stratum of mankind as a whole. There is no reason for change in our requirements for true scholarly research, and let us still affirm that there are no short cuts to scientific pronouncements. Let us not now sit by and allow our medical culture, which for so many generations has had as its base pure, bare facts — I say let us now not let it suffer by premature statements regarding these untried cure-alls. Let us not, just because of temporizing monetary successes, sacrifice the sound basis upon which human ills are to be treated by recognizing in the practice of medicine persons with limited and unsatisfactory medical training. Is the time not ripe for us to strive to impress upon our legislators and those who administer the laws the importance of right and wrong in these matters when they are dominant factors, not only in human health but even in life itself?

What we need today is not security but a well founded faith in our institutions and in those who are responsible for their functioning. Let me emphasize — a well founded faith which will follow when integrity and character represent the qualities of those who lead us in high office both medically and politically. What a reprieve is given to us all, regardless of religious or political affiliations, in such times as these when we see from afar off on the Asiatic horizon a man who fills the requirements of the full stature of manhood, with a wife and son who set out for our shores on their homeward journey. With such a leader we do not need to read between the lines of his utterances to find their meaning. The full requirement to be able to understand these pronouncements is merely to listen to what is said and in terms of plain English the statements we hear are in substance and fact that which is intended to be relayed to us for our own thinking.

The last two years have been busy years. It has been a great pleasures and an honor which can be truly measured only by one who has passed through the same office and been subject to the same experiences. During this time medicine has become more militant, more concerted and united in its action. It has been privileged to sit at the table with the laymen, with the representatives of labor unions, with the voters, with the farmer and, yes, with the F.B.I., and we have learned to respect each one a little more by such contacts. With such men in these various capacities with whom we have conferred we have been impressed by their sincerity and have been led to believe that they likewise have been impressed by our genuine interest in their individual welfare. These are the accomplishments which stimulate an increase in mutual faith. These are the factors which bridge the misunderstandings and work for peace. It is such constructive progress as this that will in itself outdate the atomic warfare and make the elaborate preparations for atomic defense unnecessary in our international relationships. It will promote harmony not only between individuals, but between nations and an understanding in place of misgivings and distrust. Our President in Washington two weeks ago spoke before the National Preparedness meeting. His talk was, to my way of thinking, the best he has ever made on a national hook-up. He failed in just this one point, however, which was most important, and that point was that he placed his full emphasis on the preparation to defend our shores when atomic aggression comes. Why can we not have men of sufficient character and faith so that they may establish between the nations a true belief in our negotiations for peace, so that the atom bomb may never even be thought of in association with any foreign terms of attack. There was a time when Russia had its Czar, Germany its Kaiser, Spain its King and France its President, but each was allowed to live by their form of government without external meddling, even though they may not have met our standards or ideals of cooperative administration. Pope in his "Essay on Man" stated it well when he said:

"For forms of government let fools contest:
Whate'er is best administered is best.
For modes of faith let graceless zealots fight.
His can't be wrong whose life is in the right."

Our medical leadership in recent years has proven to us that when extended to a broader level of national and international policy, we can still

have faith enough in the people of the world to have a firm basis for our belief that if they are left to carry on their own work as they see fit to do it, and encouraged in those best enterprises without too many restrictions, we will still have peace in our time.

Much do we owe to the many distinguished men who have filled this office before me. The continuity of the work I leave to the many qualified men who are to follow in the years to come. I bespeak for them the same hearty cooperation which has been my pleasure to experience and a faith in their fellowmen with an added faith in the ultimate outcome for good of our great present day debacle. Individuals must be encouraged to do their part, and those of us who claim the right to think must prepare ourselves to be leaders, not only from a medical standpoint but also in civic matters, that our system of free enterprise may not come to a disastrous end and perish from the earth. No nation in all the world give one such great opportunity to live and live in all its fullness as does this, our own country, in which we hold this year our one hundred and eleventh annual meeting.

"Our hearts, our hopes are all with thee —
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant o'er our fears,
Are all with thee — Are all with thee."

30 North Michigan Avenue

Diagnostic Aids in the Treatment of Anemia

Raphael Isaacs, M.D.
Chicago

It is difficult, and at times impossible, to diagnose anemia without a complete history, a thorough physical examination and an adequate laboratory study of the patient and his blood. Occasionally an outstanding group of symptoms such as grayness before the age of 30 years, sore tongue, tingling of hands and feet, loss or diminution of sensation in the feet, slight tinge of icterus of the selera in a person who is very pale may suggest that pernicious anemia is very probable. Pallor alone is not diagnostic, and is often misleading, as skin color, pigmentation, thickness, and vascularity determine the shade. Jaundice may arise from sources other than hemolysis. Cracking of the corners of the mouth, although sometimes present in iron deficiency anemias, may also be associated with deficiency of certain vitamin B factors. Spoon nails (koilonychia) make one look for iron deficiency anemia. Splenomegaly may arise from many causes, but is always abnormal and suggests study for its origin.

Presented to the Northern Tri-State Post Graduate Medical Association, April 11, 1950.

The actual diagnosis is made from a study of the blood. If but one test would be available, the blood film gives the most helpful data. Some feel that the hematocrit reading is the most valuable test, but unless the cells are sedimented perfectly, the test is worse than useless. The number of grams of hemoglobin per 100 cc if adequately determined, tells at once whether anemia is present or not. Whether the anemia is "hyperchromic", "normochromic" or "hypochromic" must be determined by a comparison with the red blood cell count. If the number of grams is multiplied by 3, and the number obtained is divided by the first 2 figures in the red blood count, a number is obtained which suggests the degree of filling of the red blood cells with hemoglobin. If the number is practically 1, the condition is "orthochromic" (normal; aplastic anemia; anemia in nephropathy; some hemolytic anemias). If the number is distinctly above 1, the condition is "hyperchromic" (pernicious anemia, macrocytic anemias of sprue, myxedema, hepatopathy, carcinoma of the head of the pan-

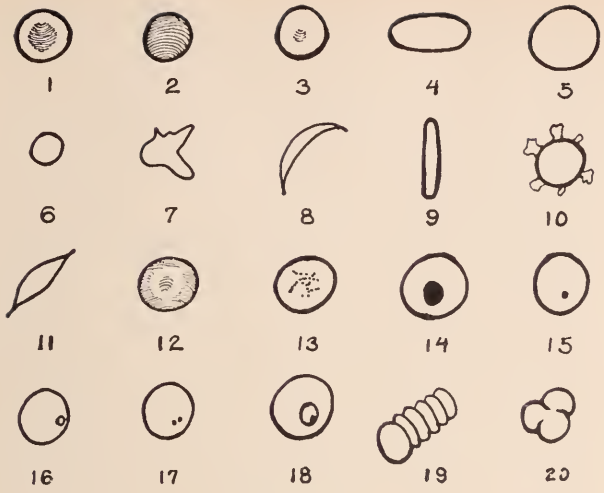


Figure 1.

creas, intestinal short-circuiting, anastomoses, tape worm anemia, celiac disease, chronic diarrhea). If the number is definitely low, the condition is "hypochromic" (anemia of hemorrhage, nutritional anemia of infants and children, iron deficiency anemia). This index replaces the older "color index", which compared the percentage of hemoglobin, with reference to a hypothetical, but non-existent "normal", with the percentage of red blood cells, compared to a similar arbitrary standard. Normally the concentration of hemoglobin in the red blood cell is about 33%, or 1/3 of capacity so that the figure obtained by multiplying by 3 is independent of arbitrary standards of reference.

Explanation of Figure 1

	Structure	Significance
1.	Normal R.B.C.	In normal health. Also in aplastic anemia, nephropathy.
2.	Spherocyte	These red blood cells hemolyse readily. Hemolytic process.
3.	Semi-spherical R.B.C.	Same as spherocyte.
4.	Large oval R.B.C.	Noted in pernicious anemia.
5.	Large round R.B.C.	Noted in macrocytic anemias, other than pernicious anemia.
6.	Microcyte	Small red blood cells, from the size of those in anemia of hemorrhage to the fragments in pernicious anemia and polycythemia vera.
7.	Poikilocyte	Irregular forms suggesting a disturbed marrow.
8.	Sickle cell	Develop in the blood in sickle cell anemia and in sickle cell trait.
9.	"Pencil" R.B.C.	Length 5 times the width. Suggest chronic hemorrhage. Present also in ovalocytosis.
10.	"Exploded" R.B.C.	Hemoglobin escapes through cracks in red blood cell "membrane" while making the film. Suggests a hyperplastic or crowded marrow.
11.	Amphioxic R.B.C.	Suggests acute hemorrhage.
12.	"Target" R.B.C.	Attracts attention to the liver. Hepatopathy.
13.	Reticulocyte	Young red blood cell. If increased in number suggests active regeneration.
14.	Nucleated R.B.C.	Very young red blood cell. If increased with an increase in the number of reticulocytes, suggests active regeneration. If increased alone, suggests foreign growth in the marrow, or myeloid metaplasia in the spleen.
15.	Nuclear particles.	Increased after splenectomy. Suggests disturbance in marrow function.
16.	Inclusion bodies.	Present in poisoning with phenlhydrazine and some sulfonamide compounds.
17.	Rickettsia.	Infection with specific organisms.
18.	Malarial parasites	Malaria.
19.	Rouleaux formation	If marked, means rapid sedimentation rate of r.b.c.
20.	Autoagglutination.	Suggests neoplasm, severe septic, pyogenic infection, Hodgkin's disease, multiple myeloma.

Much may be learned from the unstained film. The distribution of the cells can be noted, whether separate and uniformly arranged or whether there is rouleaux formation (a measure of the sedimentation rate) or autoagglutination (neoplasms, myeloma, Hodgkin's disease, sepsis). From the "holes" in the blood film (low power; light cut down) it may be determined whether the lipoids are finely emulsified (pin-point dots) or whether they are in large globules (suggesting defective emulsification of fat, associated with deficiency in the secretion of bile).

It may be determined whether the red blood cells are spherical with no central depression or semi-spherical (hemolytic anemias). The shapes and sizes of the red blood cells can be noted (anisocytosis, microcytosis, macrocytosis, oval macrocytes of pernicious anemia, round macrocytes of other macrocytic anemias, sickle cells, "pencil" shaped red blood cells (usually less than 1%) of chronic hemorrhage, "target" red blood cells of hepatopathy, distorted forms of disturbed red blood cell formation, occasional amphioxic (oat-shaped) forms of acute hemorrhage or "exploded" forms of a "crowded" hyperplastic or neoplastic bone marrow.

In the stained film, the increase or decrease in the number of young red blood cells can be noted (diffuse basophilia, polychromatophilia, reticulum, nuclei), and the presence of parasites (malaria), nuclear particles (splenic hypofunction or absence), inclusion bodies (certain poisons) and rickettsia.

As a resistant iron-deficiency develops in pyogenic infections, data from the white blood cells are important. Basophilia of the granules of the neutrophiles, Döhle bodies (blue-staining areas in the cytoplasm), and vacuoles suggest types of infection in which pus is produced (staphylococcus, streptococcus). The maturity of the leukocytes suggests the degree of adequacy of the bone marrow in responding to the call on it. Leukemia, in some stages, will account for certain forms of anemia.

An increase in the number of blood platelets may suggest recent hemorrhage, and a marked decrease may suggest a cause of the bleeding.

The various types of fragility tests are helpful in some patients. In congenital hemolytic anemia, the red blood cells are less resistant than normal to diluted saline solutions, the lysolecithin test may be positive, and the Coombs test may be negative. In acquired hemolytic anemia, the red blood cells may not dissolve more easily than normal in diluted saline solutions, there may not be abnormal hemolysis with lysolecithin, and the Coombs test may be "positive". Gross exceptions to this rule are, however, encountered.

Blood bilirubin determinations may be of confirmatory value, (normal 0.2-1.7 mg. per 100 cc, most patients between 0.2 and 0.8 mg.%) and the value may be expected to be elevated *if the liver is unable to take care of the excess pigment.* Bilirubin is usually absent from the urine in uncomplicated cases of congenital hemolytic anemia, and urobilinogen is occasionally increased in some patients with hemolytic anemia. As a rule the bilirubin in the blood, as reported in the Van den Bergh test, is "indirect" in the hemolytic anemias, but may vary when there is some degree of associated obstructive jaundice.

If it is quite impossible to draw adequate conclusions from a study of the patient, the blood and the urine, a bone marrow study may be helpful. Marrow may be aspirated from the sternum, ilium or spinous processes of the vertebrae, or, in infants, from the tibia. From a marrow study it may be determined whether red blood cells are adequately produced or not, whether there is a "block" in their maturation, whether other complicating factors are present (leukemia, myeloma, neoplasm, amyloid, miliary tuberculosis).

After the diagnosis has been made, the treatment usually falls into one of three categories. In the macrocytic, hyperchromic anemias, the choice is of liver extract, liver-stomach-folic acid preparations, vitamin B_{12} and activators. Ordinarily, the dose of liver extract is at the rate of 1 unit per day, given in multiples at weekly, fortnightly or monthly intervals. The dose of vitamin B_{12} is similar, using 1 microgram as the requirement per day. Oral dosage requires daily medication, and varies with the medication used, whether liver, liver-stomach preparations, vitamin B_{12} with or without "activators" or folic acid. The importance of adequate amounts must be stressed.

In hypochromic, microcytic anemias, iron is indicated. At present it is not possible to make an unqualified statement as to whether sulfate, carbonate, gluconate is superior. Presumably, iron in the ferrous form is adequately absorbed

and, in man, appears to have some advantages over the ferric type. Some patients show evidence of iron poisoning (nausea, abdominal pain, diarrhea, constipation) and are unable to take it by mouth. In these patients intravenous forms may be tried, although they are not without adverse reactions. In these individuals it may be helpful at times to try some of the mixtures which are available, containing iron with vitamins, liver, folic acid, molybdenum, ascorbic acid, and other substances. Occasionally a patient will tolerate some of these combinations when the reaction to the ferrous salts alone is bad, a very definite clinical observation unexplained by theoretical considerations and not sanctioned by the authorities. In pyogenic infections and in some neoplastic conditions, no gain in hemoglobin values may be expected with iron medication.

In the hemolytic anemias, if the cause can be found, the anemia usually responds to its removal. In congenital hemolytic anemia, splenectomy is still the final therapeutic procedure. In the acquired types, this operation is not always successful, although some improvement may be noted in about one-half of the cases. Transfusions may be necessary, but are frequently of temporary value. High doses of vitamin A have been suggested.

A common form of hemolytic anemia, frequently unrecognized, is present in individuals who do not secrete enough bile. At some meals the fat is inadequately emulsified, and presumably remains in the intestine longer than normal. Products of fat decomposition (presumably fatty acids) are absorbed and produce hemolysis. The degree varies from day to day and with the content of the meals. As a rule there is but little accumulation of bilirubin in the blood, especially when the liver is normal. This type of anemia does not respond to iron or liver therapy, but disappears when extract of whole ox bile is given before each meal. In some patients the process is helped by the addition of calcium lactate to the meals. The diagnosis is made by finding semi-spherical red blood cells, increase in the percentage of monocytes with vacuolated forms, and, large lipoid globules in the blood films.

The treatment of aplastic anemia is still unsatisfactory, and repeated transfusions of blood are required. In these individuals, as in any patients requiring multiple transfusions, attention must be given to the Rh factor, to minimize reactions. The diagnosis is based on severe anemia, normochromic and normocytic, with absence of young forms (reticulocytes), reduction in the number of neutrophiles and platelets, and an "aplastic" bone marrow.

Anemias of pregnancy may belong to any of the types enumerated above, as well as the "physiological form", from dilution of the blood in the last trimester. The treatment depends on the cause, a high protein diet having been recommended for the last condition.

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It is getting more and more difficult to properly educate the medical students, as the general hospitals will not take tuberculosis, although in my opinion they should always take a group of acute tuberculous infections and a few cases of acute miliary tuberculosis. The next most important point is that every general hospital should, for the sake of the students, take in several cases of early tuberculosis, just to show the students, doctors and nurses what can be done with early cases. There is a very definite function for the general hospital in this connection. The second important function of the general hospital is a tuberculosis dispensary; every large general hospital should have, in connection with its dispensary, a tuberculosis department. This can very easily be established and the advantages are enormous. In addition to the educational advantages to the students, it is a very great advantage in being a place where physicians can send their cases for early diagnosis, as it can be done so much better here than in connection with the board of health. These educational aspects should be borne in mind, and tuberculosis cases should be encouraged to come and nurses encouraged to look after them. This matter would be a help to the hospital and to all connected with it. Nat. Tuberc. A. Tr., William Osler, M.D., 1905.

The Relationship of Health Department Programs to the Practicing Physician

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I am grateful to the program planning committee for including Public Health among the topics to be discussed at this session—The Andy Hall Meeting. Both Dr. Andy and public health programs are very timely and popular subjects everywhere in the land, and, as most of you no doubt know, the two came together in a direct relationship at the state level when, under Governor Louis Emmerson, Dr. Hall served as Director of the Illinois Department of Public Health.

Although the ideals of the professions concerned in public health were the same then as now, the methods and the scope have changed considerably. Since the time when Dr. Hall was Director (1929-1932) important happenings within the laboratories and in the world outside have increased man's understanding of his biological and sociological needs and have produced significant changes in his way of meeting them. Without taking time here to particularize each of the major events which go to make up the whole of progress, I do, however, want to sum them up in terms of broad categories of activities which have influenced the evolution of public health programs and their relationship to the practicing physician. I have grouped these events into three classes:

First, the accumulation of new knowledge through laboratory and field research. Inasmuch as the discoveries in the laboratory are well known to practicing physicians, I shall elaborate only on the field or demographic research. In 1927-32 the Committee on the Cost of Medical Care made its vast study of medical economics in the United States. From the information gathered 28 volumes were published. Volume 22 of this series, the famous Lee-Jones Report stimulated widespread popular interest in medical economics. These data, which are now a bit out of date, are still the best available and continue to be used as resource material. The next major field study was the National Health Survey conducted by the U.S. Public Health Service in 1935-36. This was a tremendous sampling study on the health of the population; in all, 800,000 families (2.8 million persons) were queried in a house to house canvass. The facts that emerged pointed up the importance of chronic illness in relation to various socio-economic factors. A third national study of significance was that of Dr. Haven Emerson; it analyzed the situation with regard to local health departments. Out of this study came new impetus to strengthen health service at the local community level and to provide such service under trained professional personnel in the rural areas as well as in the larger cities. There have been countless other studies such as the Chicago-Cook County Survey, the hospital surveys in each of the states, the various state and city surveys on chronic illness, the American Academy of Pediatrics Study on Child Health Services and the Metropolitan Life Insurance analyses. The results of these studies in the field and the miraculous work of the laboratory, have, in one way or another—through education or publicity—reached the man on the street. The findings have stimulated his thinking and in many instances, have inspired him to action.

The second major impact on the evolution of public health programs has come about to a large extent from the first. This impact may be described as increased popular action for health. In 1935, Congress passed the Social Security Act, which in addition to old age and survivorship benefits, provides for federal grants-in-aid for general public health services, maternal and child health, and crippled children's programs. Subsequent Congresses have passed additional laws with grants-in-aid for tuberculosis, cancer, hospital construction, mental

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health, and heart disease control. Similarly the General Assembly has passed laws for licensure of maternity and certain general hospitals and nursing homes; for subsidy of tuberculosis care; for grants-in-aid for hospital construction, for premarital and prenatal tests for venereal disease; and enabling legislation for creating hospital districts, and for creating county and multiple county health departments.

This legislation has come about from a variety of sources within the general population. In reference to State legislation, the law requiring the State Department of Public Health to set up facilities to aid in cancer control was sponsored by a Chicago group who caused the introduction of a Bill in the Legislature before any officer of the State Department of Public Health was aware of the proposal. The prenatal blood test Bill was introduced by agencies outside the Department, as were the TB subsidy, nursing home licensure, the First Aid Station in the State House, and the Hospital District Act. The kind of legislation which is sponsored by the Department of Public Health is usually in the form of amendments to existing health laws in order to bring them up to date and to make them administratively more practical.

In addition to the enactment of laws, community motivation has taken the form of lay health councils and committees, and the creation of a large number of voluntary agencies to cope with specific health problems. There are now several hundred voluntary agencies and nearly 300 community health councils in the United States. The community health councils, according to a recent release by the American Medical Association* have achieved, among other things, "construction of hospitals with the aid of the Hospital Survey and Construction Act; securing more doctors, dentists, nurses and other needed personnel; and development of full time local public health services. Councils have matched government funds to pay mental health clinic personnel—and they have been especially important in bringing better medical care to the people of rural communities".

The Dental Program in the State Health Department is an example of a program motivated from within a professional group: for a number of years ago Public Health Dentistry was encouraged by the State Dental Society to the extent that the Society for a time paid the salary of the public health dentist who administered the program within the Department.

To go back one step farther, to the beginning in fact, the State Health Department itself came into being through the efforts of the Medical Profession. The Wabash River Aes-'cu'liapian Society about a hundred years ago made the first overtures to the General Assembly to establish a Department of Public Health. Time, circumstances, and the newly founded Illinois State Medical Society 25 years later succeeded where the earlier efforts had failed. The State Society too was behind the movement to permit decentralization of public health activities through passage of the County Health Department Law.

These expressions in terms of legislative acts and community organizations are evidences of democracy in action—people, in all walks of life, banding together to attain ends which are, in many instances beyond attainment by individual endeavor.

The third and final category of influences which have had a bearing on health department programs is the change in relative importance of various levels of government. Only a few years ago the states were the strongest arm of the three-level system of government—local, state and federal. The states raised the bulk of the revenue and were vested with the responsibility to carry on the bulk of the governmental functions. The trend of late years has been to strengthen the fund-raising powers at the federal level and to increase the authority for self-government at the local level, with grants-in-aid from federal and state sources to supplement the more limited fund-raising powers at the local level.

It is now generally agreed that in the public health field most of the broad responsibilities and authority placed in the hands of the State Health Department by the people many years ago might better be carried out at the local level, where the problems, the people, and the administrative mechanism are all closer together.

The Illinois State Medical Society has subscribed to this principle in its support of the County Health Department Law and the Amer-

*J.A.M.A. week of April 22, 1950.

ican Medical Association in its twelve-point program for advancement of medicine and public health, advocates the establishment of local health units for basic public health services. The basic public health functions—communicable disease control, environmental sanitation, vital statistics, maternal and child health, public health nursing and community health education —can, under average circumstances, best be carried out at the local level. If a new problem gets introduced into a local level, or an old problem gets too big, or, if the local unit should fail in carrying out its functions, "higher levels of government will step in, not because they want to but because the people demand the services from somewhere".*

Out of these broad stimuli—the accumulation of new knowledge, motivation for action through organized community effort, and reliance on government for assistance in coping with certain health situations, the now operating public health programs have emerged.

All public health programs have their roots in legislation—either in specific statutes which spell out much of the administrative detail or by way of derivation from the combination of broad statutory authority, popular request, and scientific advances. The State Health Department looks to the practicing physician for counsel and guidance in the evolution of its programs. The major operating programs which have a bearing on clinical medicine are discussed with the Council of the State Medical Society prior to adoption either as State level activities or as recommendations from the State Health Department to the local health department. Each program, prior to its introduction in a local area is again presented to the county medical society for its approval, amendment, or other action.

The practicing physician is in on the planning of many of the public health programs even before they are presented to the Council; for most of the categorical programs like maternal and child health, tuberculosis, cancer, hospitals, and industrial hygiene have the assistance of advisory bodies with strong medical representation thereon. The local boards of health and the State Board of Public Health Advisors each contain among their membership representatives of the practicing medical profession.

So, in the planning stage, as well as in the execution, the practicing physician is involved in public health programs. His relationship varies of course with the nature of the program; in some his contribution is direct and decisive; in others, the relationship is more remote.

As an example of the more remote kind of relationship I would like to cite the environmental sanitation programs—water purification, scientific sewage control, milk and food sanition, and rodent and insect control. The technicalities of these programs come within the professional province of the trained sanitary engineer and hence are matters of indirect concern to the practicing physician. The end point of all environmental sanitation activities is, however, of direct concern to the practicing physician because the goals of the sanitary engineer and the physician are identical: the prevention of disease.

The laboratory programs of the Health Department have a more direct bearing on the day to day problems of the physician in clinical practice. The laboratory service is now a highly centralized activity on the State level with laboratory units in Chicago, Springfield, Champaign and East St. Louis. The goal is decentralization insofar as is consistent with efficiency and economy. It has been a nip-and-tuck struggle for funds and personnel to keep the programs in bacteriology, virology, and immunology at their enviably high level of excellence. The present services are largely restricted to diagnosis of infectious diseases and to testing samples of water and milk as a part of the communicable disease control responsibilities but include accrediting of local laboratories for a limited range of services—blood typing, including Rh, Wasserman like-tests and pneumonia typing. Whether or not the area of laboratory service should be expanded to include more extensive evaluating mechanisms on the reliability of clinical laboratories has for some years been discussed in the staff meetings in my office.

Evidence has been assembled which indicates that the results of tests done in local laboratories are not always reliable and that considerable

*Address of Governor Adlai E. Stevenson before the 4th Annual Philadelphia Bulletin Forum, March 21, 1950.

improvement might be made in this respect. Surely the accuracy of laboratory results concerned with diagnosis is of primary importance to all concerned. Whether the drive for greater reliability of these services will come through voluntary channels—like the American College of Surgeons—or the official channels of the health department is still an unanswered question.

The relationship of the practicing physician to this program may well be one of active interest and support of efforts at improvement, not only as they affect his local private laboratory but also as they operate throughout the State.

As you may realize, a good laboratory is an expensive service to operate. There must be countless checks and controls, so that the report on the unknown sample can be issued with confidence. This requires expert personnel and funds. Exigencies of the War caused the Department to close the Galesburg branch laboratory and, since the War, funds have not been available to reopen it at Galesburg or in some other part of northwestern Illinois. If there is need for this service in that area of the State, the practicing physician is the logical person to make it known.

In the area of personal health services, the liaison between the Health Department and the practicing physician is much closer than in the programs which have to do with environmental sanitation and laboratory service. The programs which are encompassed by the term personal health services are Communicable Disease and Venereal Disease Control, Tuberculosis, Cancer and Heart Disease Control, and Maternal and Child Health Programs. They touch most closely the day to day work of the practicing physician although they also involve other professional disciplines such as nursing, veterinary medicine and dentistry. Administratively, these personal health services originate either from specific statute or broad authority and scientifically they take their origins from vital statistics and medical science. They involve the application of the principles of preventive medicine to population groups and do not attempt to get into the clinical practice of medicine. The purpose of these public health programs is to do case-finding and to promote immunizations and other health protective measures which the practicing physician, who, because of the code of medical ethics or because of lack of field staff or because of the tremendous amount of work he is already doing in his clinical practice cannot undertake. The practicing physician sees the patient only when he is motivated to come for care, and, as we all know, this is often too late for the best to be done for the individual or the best to be done for his family and his community.

A good example of how all these personal service programs might in general function is contained in the tuberculosis control program. The goal is case-finding at the earliest possible time in the course of the disease so that the individual may stand the best chance of prompt and complete cure and that the family and the community may be protected against further spread of the disease. The methods used are (1) motivation of the people to take part in the case-finding, (2) the application of screening techniques such as mass x-ray and skin testing, (3) referral of the suspects to their family physician and (4) follow-up on the suspects who do not report to their family doctor. The fifth step — which comes at the end of this chain of activities, is evaluation — statistical evaluation — to find out what the score is, not in terms of the individual case but in terms of the total community picture.

All of these steps, to be carried on efficiently, economically and intelligently require not only a thorough understanding of the science of medicine, but also the science of public health and the mass phenomena of disease. This kind of work requires knowledge of the principles of epidemiology, statistics, the theory and the practice of administration, and a working knowledge of the literature in both clinical medicine and public health. This kind of analysis demands the deepest kind of perception lest only the surface phenomena be seen. As there is often more to a boil than meets the eye, so, there is often more to a diesease than is revealed by the findings on the patient himself. As it takes special skill to trace the meanderings of bacteria and other causative agents through subcutaneous structures and to head them off before great harm is done, so, in public health, it requires special skill to trace the ecological factors and relationships which lie beneath the surface phenomenon of the individual case.

In most instances the factors underlying disease must be searched for with the same measure of diligence and skill as are used by the clinician in localizing the cause of a patient's complaint. In some problems — like tracing down the origin of the case of typhoid fever — the process is fairly easy but definitely time-consuming; in others, like typhus, brucellosis and the spotted fevers, the search ends up in the animal population; in still others, such as histoplasmosis, the search at the moment leads to a blank wall.

It has now become apparent that some of the largest problems of public health are not limited to the area of communicable disease or man's battle with the microscopic organisms. Due to the changing composition of our population and due to the measure of control which has been attained over communicable diseases, a new set of problems faces the health professions. People are not dying from acute diseases in infancy and youth; instead, they are living on to ages which are associated with chronic and degenerative diseases. Fortunately, the principles of preventive medicine and public health which have evolved from experience with communicable disease are also applicable to the study and control of non-infectious conditions. These scientific principles are the warp and woof upon which to design future public health programs — such as multiphasic screening for chronic diseases and control of radiation hazards incident to the more widespread use of radioactive isotopes.

Public health is only one of the methods used by the medical profession to promote the prevention of disease, to prolong life and to increase happiness. Although many professional groups and the consumer of services are concerned in the planning, execution and evaluation of public health programs, medical science remains the core of public health. It is therefore entirely logical to expect that persons trained in medical science — the physicians — should be most intimately concerned that the quality and scope of public health programs and the competence of the administrative staff measure up to the demands of the circumstances.

The Principles of Medical Ethics of the American Medical Association state this responsibility in the following terms:

> "Physicians, as good citizens, possessed of special training, should advise concerning the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity."

People in a democracy are free to gather the unfettered facts that emerge from the laboratories and the field studies; they are free to act upon them individually or through organized community effort; they are free to delegate responsibility to the bodies which govern their common welfare at any of the political hierarchial levels. The great need in arriving at goals through conjoint effort — through health department programs — is for leadership, guidance and teamwork. It is these three qualities — leadership, guidance, and teamwork which characterize the ideal relationship between health department programs and the practicing physician.

The State of Illinois Cooperates With the Ophthalmologist and Otolaryngologist

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The otolaryngologists and ophthalmologists in their professional life deal with many children who because of a variety of disabilities need the skills of many types of workers. While the complexities of the problems of these children have been recognized a long time by many physicians, one need only peruse medical literature to be struck with the present emphasis on collaboration, integration, and teamwork! Physicians ally with themselves different types of technicians and thus give recognition to this teamwork. No longer can the doctor alone meet all the problems of his patients. Many of the physician's allies are not employed by him directly, nor are they all found in hospitals. This discussion will point out some of the resources which the patient may need to bring about a complete adjustment (medical, social, and educational) and for which the physician needs to rely on community rather than individual resources.

The State of Illinois in terms of aiding the handicapped is far ahead of many or even most states. Specific programs have been set up which rely upon the help of the practicing physician for their success and which in turn can be of considerable assistance to the physician and his patient. We shall deal with the discussion in terms of the State level agency though the actual program content is usually carried through on the local level. In the Department of Public Welfare we find the School for the Deaf and the School for the Blind located in Jacksonville. Also, this Department has a Division for the Blind which works with pre-school children and adults to further educational activities for children and aid adults make a more successful adaptation to the demands of the seeing world in which they must live. The Eye and Ear Infirmary in Chicago is an institution which now is a joint responsibility of the Department of Public Welfare and the University of Illinois. The Hospital-School for severely handicapped children, also in Chicago, serves largely children with orthopedic and neurologic disorders. It is a unique institution whose value to the State is only beginning to be appreciated.

In the Department of Public Instruction the Division of Education for Exceptional Children has helped local communities build outstanding programs for various types of handicapped children. Many school systems have special classes for the visually handicapped, the deaf, and the hard of hearing.

The Division of Vocational Rehabilitation in the Department of Education and Registration has programs of both medical care (called physical restoration) and vocational training for individuals who in order to be eligible must have what is known as a vocational handicap. Vocational guidance, training, and successful placement are for many handicapped individuals the final three steps toward attaining a happy, useful life.

The Division of Services for Crippled Children of the University of Illinois conducts a medical care program which can be helpful to children with many kinds of disabilities. This division's program was initiated in 1937 in collaboration with the U. S. Children's Bureau as a part of the wide program under the Social Security Act. In the beginning the children with orthopedic difficulties and those with conditions responding to plastic surgery, particularly the children with cleft lips and palates and burn contractures, were the only ones benefitting from the program. This statewide medical care program has always been well accepted since it was able to offer services to children who might not otherwise get excellent care because services were not readily available due to two principal causes—economic handicap of the parents or

Adapted from a paper presented to the Central Illinois Society of Ophthalmology and Otolaryngology on November 19, 1949.

lack of resources in or near the place of the child's residence. Recognition of the worth of the program is shown from the fact that at the present time approximately seven times more state than federal appropriation goes into the conduct of the program. Over a period of years services to other types of children have been developed, always in recognition of a demonstrated need based on the fact that many children could not obtain the types of medical care which they needed to help them obtain a useful, independent life rather than one in which they would be public charges in institutions or through local welfare agencies.

Several years ago while collaborating with the Division of Education for Exceptional Children, it became evident that many children with hearing difficulties needed help through medical facilities and thus children who were deaf and hard of hearing began to be served by the Division. At the present time we doubt if any State can point to a better balanced program for this group of children. Private physicians, school health programs, the hospitals, the Division of Services for Crippled Children, the Department of Public Welfare through the School for the Deaf, the Division of Education for Exceptional Children and the Division of Vocational Rehabilitation give through their combined resources services which probably are not excelled anywhere. It must not be thought for a moment that all children need all the services or that all children needing various services can obtain their needs uniformly. Resources are spread rather thinly and in many sections of the State resources in the local area are almost completely lacking and thus must be obtained at a distance. This factor introduces new difficulties some of which lead to missed appointments in the physician's offices as all know.

It might be well to run through the list of services that a child who is deaf or hard of hearing may need and to mention the various types of personnel that serve him. First, let us point out that since its inception the Illinois program for the child with hearing loss has been developed from the Syllabus on Hearing Conservation of the Academy of Ophthalmology and Otolaryngology. A child may be found in routine physical examination by the family doctor to have a hearing loss when he is being prepared for entrance to school. It is late in the child's life to realize this fact the first time but in our present level of progress it is at this point that most of the children are first found. From the family physician, often through the health department, the cases are referred to the Division of Services for Crippled Children for further evaluation and planning for future care. Let me pause here to indicate the valuable resource that exists throughout the State in the health departments when they are available on a county or more local level. It is here that a heavy proportion of case finding is done, especially where there are close working relationships between the practicing physicians and the health workers.

The division's clinics are held in about forty different communities throughout the State and at short or longer intervals depending on need. Here the child is seen by a pediatrician and a speech and hearing consultant; the latter is a division staff member who has her master's degree in her special field. She performs a pure-tone audiometric examination and other tests which are indicated and within her sphere of training and skill. If a patient is found to have a loss of twenty or more decibels in two or more frequencies in the same ear, the patient is referred to an otologist certified by the American Board of Otolaryngology for definitive medical diagnosis and plan of treatment. At the clinic a public health nurse or medical social worker may aid in interpreting to the family what may need to be done for the child. At this point the division makes a preliminary determination as to what financial part the family will play in meeting the costs of care. As is known, the division arranges for a number of patients to pay for their otological examination. One should remember also that for many families loss of one day's income and travel costs to visit a specialist often over a hundred miles away means that a considerable dent is made in a financial structure that allows for very little change from basic day by day living needs.

The otologist reports to the division his findings. Let us mention here, to emphasize the fact that the speech and hearing consultants are well-trained and capable, that there is a high (well over 90%) correlation between the audiometric evaluations of the otologists and

those of the division staff members. Office treatments, hospital care for surgery, hearing aids and training in their use, school seating placements, and lip reading instruction are among the recommendations that are made. Again planning with the family and the treatment resources is developed in order to achieve the best possible result. If a hearing aid is needed the child is sent to one of several university hearing aid fitting centers where a thorough evaluation of his problem by an audiologist and recommendation of a specific type of aid is made. Unfortunately, the most important part of the plan for care, the audiological training which brings about the best adaptation and training in the use of the aid it not readily available to a large proportion of our patients. Often they need to spend six to eight weeks at a university summer speech and hearing center before they develop best use of their newly acquired resources. Here we should point out that through the resources of the Division of Services for Crippled Children now all children at the School for the Deaf who should have hearing aids to develop their educational program to the fullest extent are able to obtain aids. This has resulted in graduating a considerable number of children from this residential school to schools in their own home community—even the regular classrooms. Thus these children are not as handicapped since they participate in all regular school activities and at a considerably smaller cost.

Efforts are directed toward educating physicians, public health workers, and the lay public to the need of making the earliest possible diagnosis in children born with a severe hearing loss or deafness. Under this educational program during the past five years we annually find more and more pre-school deaf children and begin for them and their parents the long tedious program of training and education which is needed. The annual Institute for Mothers of Pre-School Deaf Children has set a pattern which is being emulated in a number of states. Mothers and their children aged from two to five years come to Jacksonville for ten days. Lectures by authorities in child care and the medical and education problems of the deaf are combined with demonstrations concerning the training that needs to be followed to gain speech for many of these children. The children at the center are studied by psychologists, audiologists, medical social workers, teachers, and an otologist in order to point out to the mother some of the special problems of her child. Planning is started concerning the most advisable educational program for each child.

In dealing with the child who has hearing loss, a complex team needs to build for his successful adaptation to a hearing world. The physician is a key person in the team and should, if he understands the implications of the total program of care, be the one who directs the activities of the team. Since the private practicing physician is rarely in a position to give full and adequate administrative supervision to all of the necessary workers and activities, the administration of this type of program should be in a medically centered agency. Further, the problem is one which is best centered among public health activities since thus we can best bring to bear all the needed community resources.

In dealing with so-called deaf children, it should be remembered that true total hearing loss is rare. The communicative disorder (the speech problem) is important rather than the disease of the ear. The peak of language development lies for most intelligent, normal children between the third and sixth year of life. Impaired hearing leads to poor speech and this in turn leads to social and educational maladjustment. Lip reading can be taught to children as young as two years of age. Spontaneous babbling is used too at this age to gain speech as with the normal child. The normal voice is used by the parents and the teacher and one of the accomplishments that will be produced is the prevention of the well-known "deaf" voice. The physician's task is to accomplish early diagnosis and treatment and then make an appropriate referral to an educational program.

To attain the objective of getting the best life adjustment for the child with hearing loss, an ideal program has seven important phases:

1. Extensive public education
2. Adequate and early case finding
3. Thorough diagnostic examination
4. Medical and surgical treatment
5. Audiological training

6. Special education
7. Vocational rehabilitation

These seven points were recently pointed up in a discussion by William G. Hardy, Ph.D., of Johns Hopkins Hospital in a paper which was presented at the 1949 annual meeting of the American Public Health Association. The various elements of this program are actively practiced through the various state sponsored programs in Illinois at the present and the practicing otologists are among the key people who have contributed materially to its success.

Since we have observed this program for more than four years, we have had occasion to make observations which we should share with physicians in practice. Not enough of our certified otologists are fully aware of all of the implications of hearing loss to the patient and his community and are not aware of the need to turn to community resources for help to the patient. Many competent otologists still lack modern training and knowledge concerning the need for children at the earliest possible age to have amplification of hearing through the use of hearing aids. We still too often have otologists tell us and parents that children should not be harnessed with a whole lot of apparatus. After a diagnosis of hearing loss has been made and it has been determined that the speech-hearing impairment is greater than thirty-five decibels, the earliest possible moment is the best time to start to teach the child to use a hearing aid. Table models have been used by many children at two years of age and these children wear their own individual aids with no more concern than they come for their meals. How often we have to caution boys that hearing aids should be removed when going in swimming! It is a matter of common knowledge that the hardest age to fit an aid is during adolescence. War research has brought tremendous improvements in these aids and particularly has decreased their size and increased their reliability.

There is need for medically trained men with more than medical training—that is for men with training in lip or speech reading, acoustical training, and in hearing aid fitting. Men with such training will be better able to work with the highly trained technicians that are now available and who often feel lost when their medical associates are not well grounded in the fields mentioned. Courses teaching the elements of complete rehabilitation in this field are available on a post-graduate level for physicians at the Illinois Eye and Ear Infirmary, Barnes Hospital along with the Central Institute for the Deaf, the University of Iowa and at Johns Hopkins University.

The effectiveness of the otologist's office team could also be improved if the physicians' technicians had an opportunity to have more and better fundamental training. This is especially true of the girls who operate audiometers and thus do an important part of the otologists' diagnostic work. During the past summer some thirty public health nurses had an intensive two week's course in hearing testing to fit them into community conservation of hearing programs. We hope that through the University of Illinois or some other medical school a similar though perhaps shorter course may be made available to train the physicians' teachnicians.

The otologists have many opportunities to promote the development of a better hearing program in their own communities by offering their services in various ways. At universities such as Northwestern, Bradley at Peoria, the University of Illinois, and Normal courses in the training of teachers in the deaf and hard of hearing are being developed on a high level. The physicians should definitely be allied with these programs in order to give the teachers proper medical orientation concerning the general problem. A closer correlation in the community activities between the teachers and physicians will be brought about if this ground work is properly oriented from a medical point of view. Through the County Medical Societies speakers should be included on the program who will stress the total rehabilitation approach to the problem of hearing conservation. There is in the Illinois Commission for Handicapped Children a Conservation of Hearing Committee which can be called upon to help supply speakers to county medical groups. When the otologists see patients and recommend educational training, the teachers can be helped a great deal more than they are now. They should have an accurate diagnosis, should have interpretation regarding the need for periodic re-examination and should be given as accurate a picture of prognosis as is possible. A good deal of information can be gained by

the physicians if they will visit hearing aid centers to see what procedures are carried out there and what interpretation is given to patients. They should also visit the oral deaf rooms which are in their community. Local resources for training of children should be built up and it should not be a fixed recommendation to send every deaf child to the State School for the Deaf.

A final observation relates to the frequent missing of a second special sense impairment during treatment and even training of a child with a known disability. In the educational institutions directed toward training of handicapped children, one finds frequently severe social and educational impairment which becomes relieved when a further diagnostic evaluation reveals the second disorder and thus makes possible a different educational program for the child. The visually handicapped child that does poorly in the sight saving class may have a serious hearing loss too.

We hope that this review of how the members of the medical profession and the community programs of the State of Illinois can work together to improve the lot of many handicapped children who are their patients will stimulate a greater awareness of all the resources that lie about us. Where these resources are not available and needed, physicians in their role of citizens should strive to improve the resources of their own community.

Evaluation of the Huggins-Miller-Jensen Serum Coagulation Test in a General Hospital

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(With the technical assistance of Mrs. Faye Simpson, M.T., and Miss Ruth D. Senesac, M.T. (ASCP).
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The desirability of a reliable and technically not too difficult serological test for the presence of malignant neoplasms needs not to be emphasized. At the time Huggins and his collaborators have published the results of their thermal serum coagulation test—after a trial on a rather small series of cases—the impression was produced, chiefly by the lay press, that this test may prove to be such a procedure. As many physicians—not too familiar with laboratory medicine—were under the same impression and demanded its performance, it was decided to subject the Huggins-Miller-Jensen test to a trial upon the population of a general hospital. The funds for this trial were supplied by the Division of Cancer Control, G. Howard Gowen, Chief, Illinois State Department of Public Health. The results were subjected to a statistical analysis by Mr. Bernard Frank, Department of Vital Statistics, Illinois State Department of Public Health, who has also constructed the graphs. The clinical information was obtained from a questionnaire attached to all patient's records, and filled out by the attending physician. This was, whenever possible, supplemented by information obtained from biopsies and autopsies. During the 8 months of the trial 1998 tests were performed, but sufficient information for evaluation has been only in 472 cases.

The technique employed by us was that of Huggins and his collaborators, as modified by them on May 24, 1949, except that we have used for the determination of the total proteins the

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phenol reagent method with a photoelectric colorimeter, but only after we have found this method and the Kjeldahl method to give quite identical results. As it will be subsequently shown, these results were well within the expected limits. Commercially purified iodoacetic acid was used, and the pH of the reagents was frequently checked with a pH-meter.

Table 1. Results of Test in Known Malignancies.

DIAGNOSIS	POS.	NEG.	TOTAL
Carcinoma	15	16	31
Leukemia	4	3	7
Treated leukemia	2	1	3
Hodgkins disease	1	0	1
Malignant melanoma	0	1	1
Lymphosarcoma	0	3	3

Of the 472 tests in these cases 127 were positive and 345 negative. Among the former were 22 cases of proved malignancies, while the other cases ranged from pregnancies to alcoholism (see Table 1). There were 24 cases of known malignacy giving negative Huggins tests, one of them a huge lymphosarcoma, verified on autopsy. (See Table 2).

Table 2. Results of Test in Non-malignant Conditions

DIAGNOSIS	POS.	NEG.	TOTAL
Pregnancy	21	25	46
Cardio-Vascular Renal disease	18	51	69
Surgical conditions	15	38	53
Orthopedic conditions	7	31	38
Respiratory disease	7	32	39
Benign tumors	6	20	26
Acute and chronic infections	5	12	17
Diabetes	5	11	16
Miscellaneous	6	15	21
Diseases of the female genital tract	4	15	19
G.I. diseases	2	16	18
Disease of male urogenital tract	2	3	5
Psychoneurosis and alcoholism	2	21	23
Anemia, cause undetermined	2	14	16
Vascular diseases	1	13	14
Diseases of urinary tract	0	10	10
Undetermined	2	4	6

Figure 1 shows the variations of the iodoacetate index in the positive and the negative tests. The only conclusion which can perhaps be drawn

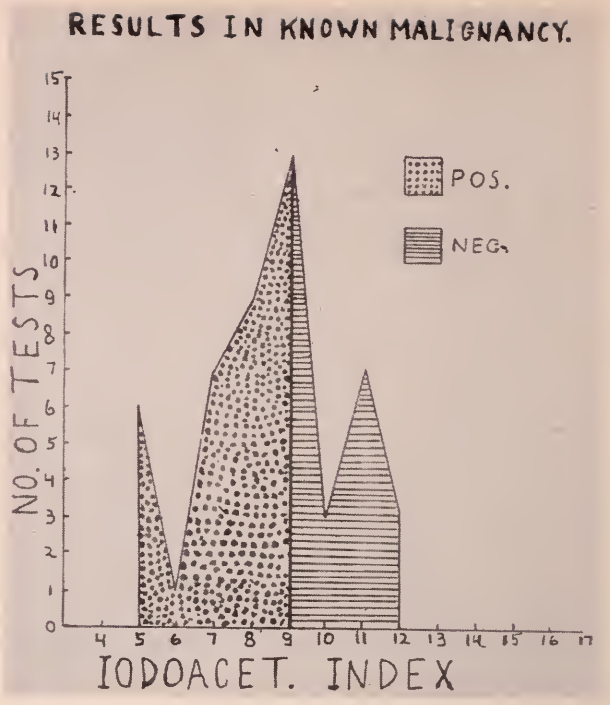


Figure 1.

from it is that the phenomenon upon which the test is based depends for its occurrence upon a more or less accidental combination in the blood serum of still unknown globulin fractions, and

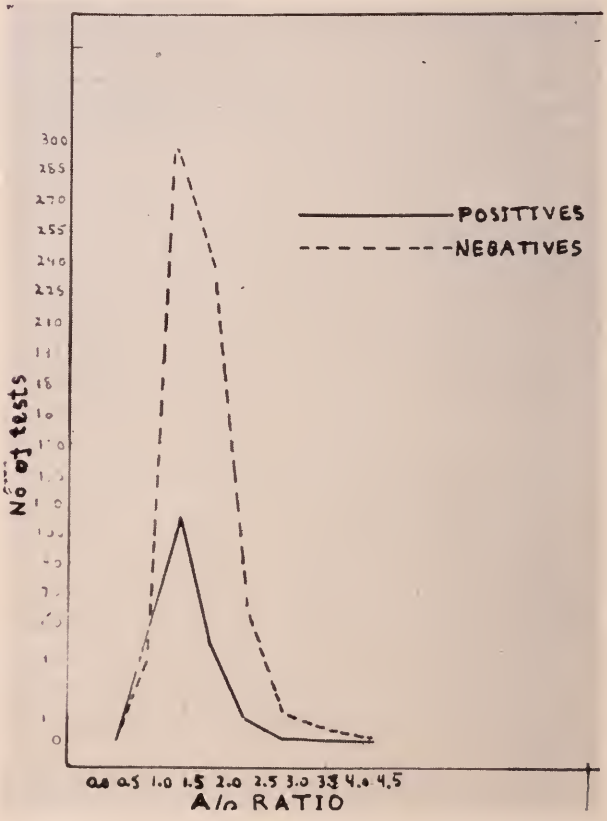


Figure 2.

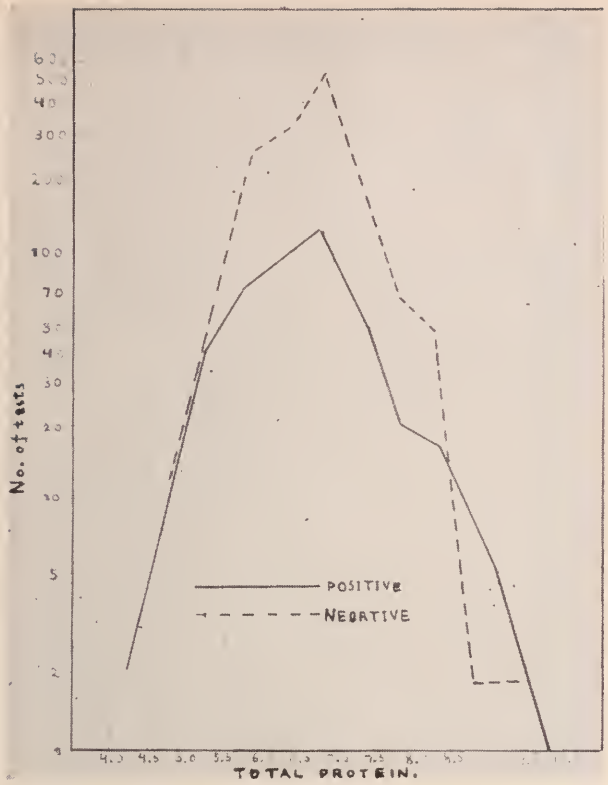


Figure 3.

that the iodoacetate index, arbitrarily selected by the authors, is too narrow to define either positivity or negativity.

Figure 2 showing the A/G Ratio in serums giving positive and negative Huggins tests reveals only that in our series no significant differences between the former and the latter could be detected by the techniques available to us.

Figure 3, showing the amount of total protein in serums giving positive and negative Huggins tests, at the first glance appears to indicate that positive tests are more likely to occur if the total protein is either markedly diminished or markedly increased. However, Mr. Frank, our statistician, disagreed with this conclusion, pointing out that the sample used is too small for any valid conclusions in this report.

In conclusion, it is our impression that the Huggins-Miller-Jensen test in its present form is in no way suited to detect malignancies, for which purpose, as repeatedly said by Dr. Huggins, it was not intended. If the specificity of the test depends, as it seems to, upon the presence of a particular globulin fraction, then it appears to be most desirable either that its technique be so modified as to detect the presence of this substance alone, or that the fraction be isolated, perhaps by the use of more selective chemical processes, and then demonstrated by other means. As it is, to us, the serum coagulation test of Huggins and his collaborators appears to be of no more practical value than other previously described serum coagulation tests.

Memorial Hospital

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The discovery of unsuspected tuberculosis among the patient population of the general hospital represents case finding under particularly favorable conditions. All such persons have already elected to become patients. It is far easier under such circumstances to obtain the cooperation of the individual and of his family. The door is open for extension of the survey to relatives, friends and known prior contracts. Isolation and treatment can be started without delay. All of the facilities for collateral diagnosis are readily at hand. The all-important step of substantiating miniature chest findings with those obtained on the basis of more extensive X-ray examinations can be carried out with dispatch and without the danger of losing contact with the individual, which often presents a serious problem in surveys conducted among large groups of supposedly normal individuals. J. Michigan State M. Society, Fred J. Hodges, M.D., November, 1949.

Experimental Approach to Coronary Disease

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Dr. Roberg: In introducing this review on the state of our knowledge of coronary disease, I should like to caution you by quoting Dr. Carl J. Wiggers' remark, "We are apt to confuse what *can* occur under experimental conditions with that which *does* occur in the normally beating heart." Clinical and experimental studies have demonstrated a satisfactory statistical correlation between arteriosclerosis of the coronary arteries and coronary disease; there is little evidence for the assumption that coronary spasm is an etiologic factor. Clinical symptoms are produced when there is a discrepancy between the myocardial demand for oxygen and the ability of the coronary circulation to supply it adequately. If this is a brief reversible discrepancy, angina pectoris is the result. If it is reversible but prolonged it is termed coronary insufficiency, and if it is *irreversible* it results in myocardial infarction. In the vast majority of cases there is some form of arterial occlusive disease demonstrable on pathologic examination. Usually it is in the first several centimeters from the origin of the coronary arteries. There is no good correlation between arteriosclerosis of the aorta and arteriosclerosis of the coronary arteries. The coronary arteries have a very thick intima which appears to allow for the continuous rhythmic external pulsation to which the coronary arteries are uniquely exposed. Even in premature infants it has been found that the intima is thicker in the male than in the female. This particular correlation might have some bearing on the subsequent development of coronary artery disease, which is much more prevalent in the male than in the female. Definite familial incidence has been demonstrated. All investigators have been impressed by the high incidence of coronary artery arteriosclerosis in diseases associated with high blood lipids. The correlation is not good with total blood lipids, cholesterol, and cholesterol esters. Recent work has shown that macromolecules, varying greatly in size, carry cholesterol, and that the final chemical determination of cholesterol tells nothing of the size and quantity of the parent molecules occurring naturally in the blood. Gofman has shown an excellent correlation between the concentration of small macromolecules (10-20 Svedberg units) and the existence of coronary artery disease. Whereas diet has little effect on cholesterol, cholesterol esters and total blood lipids, a marked reduction of these small macromolecules can be induced by low animal fat diet.

Studies in coronary blood flow are very controversial. The coronary blood flow is the most difficult circulatory system of the body to study, inasmuch as the pressure forces which augment the flow — that is, the contracting myocardium — also tends to impede it. Experimental method influences the coronary circulation, as illustrated by O_2 consumption of different preparations; thus in the heart-lung preparation in the dog, 5 cc. of oxygen/100 gm. of myocardium/min. is consumed. With the heart in situ, with anesthesia, this is increased to 10cc. Without anesthesia it is about 20 cc., and if the heart is fibrillating, thus eliminating the contraction, oxygen consumption is increased further. The problem of the determinants of peripheral resistance in the myocardium is, to date, insoluble. All studies of pressure and flow are only partial and there is no way yet available to determine total inflow and outflow. The principal factors determining peripheral resistance to flow through the myocardium are: (1) the intrinsic changes of lumen in the coronary vessels and (2) the extrinsic compressing force of the supporting

myocardium. One cannot say whether a change is due to one or the other. Factors governing coronary flow are aortic pressure and peripheral resistance. The resistance may vary extremely within the period of a few cardiac cycles, thus, if it is to be measured it must be measured continuously. Ideally, in all experiments one would like to know the continuous phasic flow curve and pressure curve in the coronary arteries, the exact duration of systole and diastole, and the total work of the heart. The coronary blood flow is closely correlated with the work done by the heart. Such studies require meticulous experimental conditions and a disciplined research team. Estimations on coronary blood flow to date have shown that with progressively decreasing percentages of oxygen in the inhaled air, from 100% down to 8%, the total oxygen consumption remains fairly stationary but the coronary blood flow increases up to 5 times. In other words, anoxia is the most potent stimulus to vasodilatation of the coronary arteries that we have. Studies with various drugs have, for the most part, been made with unphysiological methods. Practically no studies have been made on the intact animal, and frequently large doses of drugs have been administered directly into the coronary artery. Since the compounds affect, as a rule, the vigor of contraction and the length of diastole, the cardiac outputs are necessarily altered. Most of these studies have not considered these particular factors. One might mention that the concept of "reflex coronary spasm" is merely a hypothesis. According to the work showing the effect of hypoxia on coronary blood flow, it would appear that in an acute coronary occlusion the hypoxia would lead to coronary dilatation rather than the usually hypothecated reflex spasm.

The venous drainage of the myocardium is accomplished by the superficial veins forming the coronary sinus and the anterior cardial veins which also empty into the right auricle. If the coronary sinus and the anterior cardiac veins are ligated the heart becomes very congested and survival is brief. According to present evidence the Thebesian system is probably of little physiological significance. With arterial occlusion the collaterals which form are high in the coronary tree and not near the periphery. With gradual occlusion of a vessel these potential collaterals can be of definite value but in an acute constriction they will not adequately take care of the needs of the heart. The value of various recommended drugs has not been proven with regard to the subject of coronary dilatation. Experimentally, the incidence of fibrillation has been diminished and the size of the infarcts is sometimes smaller when these agents are used. These effects, however, may depend upon changes in pulmonary blood oxygenation, aortic blood pressure, duration of systole, cardiac work, myocardial metabolism, and myocardial irritability, as well as upon any effect upon the intrinsic state of dilatation of the coronary bed. Several surgical approaches to coronary artery disease have been attempted recently, some quite ingenious. Beck, for example, has anastomosed a systemic artery to the coronary sinus. This apparently protects against large infarctions and fibrillation following subsequent coronary ligation. Sprinkling of talcum powder and bone dust within the pericardium, as well as surgical fixation of lung, pericardium, pectoral muscle, and omentum to the myocardium, has given some experimental and clinical evidence of creating collateral vascular channels. The clinical course of coronary disease however, is very unpredictable and rest alone may aid the severe angina pectoris. In summary, I should like to state the role of spasm is unproven in coronary artery disease and the only correlation which has been demonstrated is that between myocardial metabolic demand and coronary flow.

Dr. Herman A. Levy, Assistant Professor of Medicine: Is there relationship between blood glucose as well as oxygen to the coronary blood flow?

Dr. Roberg: The metabolism of the myocardium is different from that of skeletal muscle. Apparently it burns lactic acid, and converts glucose to glycogen.

Dr. Robert L. Grissom, Assistant Professor of Medicine: What surgical procedures would you recommend in a case of angina pectoris?

Dr. Roberg: I am not certain. Sympathectomy might be the procedure of choice. Results are good. Sympathectomy decreases the response to stimuli. Sedation is, of course, good supporting treatment in this respect.

A Physician: Would you comment on the relationship of the findings with the Flicker-Photometer and coronary disease?

Dr. Roberg: I have not had any experience with the instrument. Dr. Littman of the Department of Clinical Science is here; perhaps he could answer.

Dr. Littman: Doctor Drasno and Ivy have recently reported that in patients with certain cardiovascular diseases there is impaired ability to recognize flicker, which improves after nitroglycerine. In normal subjects this drug caused impairment in flicker perception.

These abnormalities are particularly evident in coronary artery disease. Most interesting is that some subjects who were normal by all other criteria but had abnormal flicker tests later developed evidence of coronary disease.

Dr. Roberg: This test is of interest, and may turn out to be a valuable indicator of the neurogenic factor which is of importance in predisposing to or aggravating vascular disease. While the instrument is in this investigative phase, we must avoid the danger of creating cardiac neuroses, as so often happens with ill-advised dependence upon the electrocardiogram. In closing, I would recommend the recently published monograph by Donald E. Gregg, "The Coronary Circulation in Health and Disease", which summarizes the present knowledge of the coronary circulation.

A LESSON TO LEARN

What can we in America learn from the British experience (National Health Service)? First of all, once such a system has been inaugurated, it is not easily uprooted. If every American were handed the free medical benefits enjoyed by the British, a majority would vote into operation a similar system. Human nature makes man loathe to criticize or abolish what bears free fruit. It is the good of the system that makes it attractive, and therein lies the danger to the medical profession. The implications are clear. If we in America are to avoid a government-controlled health program with all the attendant undesirable features so costly and so detrimental to our traditional freedom of medical practice, then the profession as a whole must see that sufficient attractive, voluntary programs are set up whereby the American people can get adequate medical care whenever they need it without fear of financial catastrophe. We have gone a long way but we must go further. As Lord Horder recently said of the British profession, "It was a pity we had no effective machinery by which we could express ourselves as a corporate whole." *Excerpt: Impressions of the National Health Service in Great Britain, Jesse E. Thompson, M.D., Boston, Mass., Boston Med. Quarterly, March 1951.*

CASE REPORTS



Pernicious Anemia in the Negro

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The negro not only is subject to different diseases, but reacts to the same diseases differently than the white man. A unique opportunity for study of the negro exists in the State of Mississippi, where nearly half of the population is colored. While we at the Foster V. A. Hospital are somewhat limited — in that our patients are males only, and our age group begins at about 18 years — nevertheless, the proportion of various ailments in colored as compared to white patients is very interesting.

In a recent paper the incidence of hypertension in the two races as found in this hospital was presented.[1]

Pernicious Anemia in the negro is relatively uncommon. We have had but one case in approximately 12,000 admissions, of which 40% are colored. The second case was seen at the V. A. Hospital, Wadsworth, Kansas. A review of the literature and the findings of the two cases are being presented.

According to Minot[2], there are probably not less than 35 cases of pernicious anemia per 100,000 population. The frequency of pernicious anemia in the negro has been estimated at abont 10 per 100,000 by McCraken[3], who found 44 cases among 396,673 negro hospital admissions. In general the incidence has varied from a high of 16% of all pernicious anemia cases reported from New Orleans[4], where negro population and hospitalizations are high, compared to a low incidence of 0.6% in Boston[5], where the negro population is low.

Whether or not pernicious anemia occurs in the full blooded negro remains unknown. In the majority of cases reported, the disease was found in mulattoes. The disease in any case is considered rare under the age of 30. The first case in this report is that of a 20 year old black negro male admitted with extreme anemia, in which the criteria for pernicious anemia was established.

NOTE: Published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.

RBR, a 20 year old negro store clerk, walked into the hospital complaining of weakness, shortness of breath, and throbbing headache. He had been in good health until about six months before admission, when he began to notice shortness of breath during a mile walk to work in the morning and a "tired feeling" during the day. This was associated with low backache and dull headaches. A week or so later, he began to notice fever in the afternoon and some sweating at night. Six weeks after onset, he went to a doctor, who placed him on sulfonamide for fever. After two weeks there was no improvement; the sulfonamide was stopped and the patient given a dark liquid tonic, which he took daily for a week. He then caught a cold, characterized by generalized aching, chilliness, chest tightness, and hacking dry cough. He noticed weight loss, and continued to feel weak and tired. He vomited once during a coughing spell and raised some scanty blood-tinged sputa on several occasions. A month before admission, he was forced to quit working entirely because of increasing weakness and dyspnea.

When questioned regarding his eating habits, the patient gave a dietary history well above the average for the Mississippi negro. He stated he ate three meals a day, most of the time with the rest of the family. This usually included eggs with grits and sometimes bacon for breakfast, and meat one to two times daily. The diet was lacking chiefly in fresh fruits and milk.

The past history was essentially negative and the family history non-contributory. The patient's mother had had high blood pressure for several years; the father and three siblings were living and well. None of the family was light in color and the patient was not aware of any white blood in the family.

On admission,physical examination revealed a small, well developed, fairly well-nourished, 20 year old colored male, lying flat in bed, without acute distress. There was marked pallor of the mucous membranes, palms and soles. The eyelids were moderately swollen. The skin was dark, warm, and dry. No icterus was noted. The temperature was 99; the pulse 100; the respirations 24; and the blood pressure 110/40 in each arm. The tongue was pale with serrated margins, but not roughened or smooth. The lungs were clear. The PMI was in the MCL in the left 5th interspace, and there was no definite cardiac enlargement by percussion. The apical rate was 100 and regular with loud blowing systolic murmurs over all valve areas. The pulse was waterhammer in type. Loud transmitted heart sounds were audible over the brachial and femoral arteries. The liver and spleen were not felt. Shotty, non-tender discrete glands were found in the cervical, axillary, and inguinal areas. The sensory modalities, including vibration, were intact. No pathological reflexes were elicited. The Rhomberg test was deferred. Laboratory data is summarized in Figure 1.

Course: The patient received 1000 cc of blood slowly over 24 hours, and was placed on daily parenteral liver the following morning. The temperature rose to 103 on the 4th day and subsided in 6 days. After transfusion, the patient felt relatively well, except for fever. Convalescence was uneventful thereafter on parenteral liver three times weekly. The patient was sent home on parenteral liver thirty-two days after admission, at which time the red count was 4.5 million, the hemoglobin 12.5 grams, and the hematocrit 40. When he returned one month later for follow-up examination the red count had reached 5 million, the hemoglobin 15 grams, and the hematocrit 45. Gastric analysis again showed no free acid after 100 cc of 7% alcohol and 1.0 mg. of histamine. Histamine administration was followed by throbbing headache and sensation of warmth so it is assumed that a maximal effect on the gastric mucosa was attained. The patient had gained about twenty pounds, felt well and was discharged to the care of his home physician.

Comment: On admission the patient presented the picture of extreme anemia, without obvious interus, splenomegaly, or significant adenopathy. Aplastic anemia, sickle cell anemia, hookworm disease, and leukemia were thought of. The age and color of the patient were strong deterrents to the diagnosis of pernicious anemia. The history and physical findings did not support the diagnosis of sprue. It is true that the patient received blood on admission as an emergency measure. However, the macrocytic anemia, persistent achlorhydria to histamine, bone marrow findings and the reticulocyte response of 20.5% to liver, with an initial red count of .86 million, established the diagnosis of pernicious anemia.

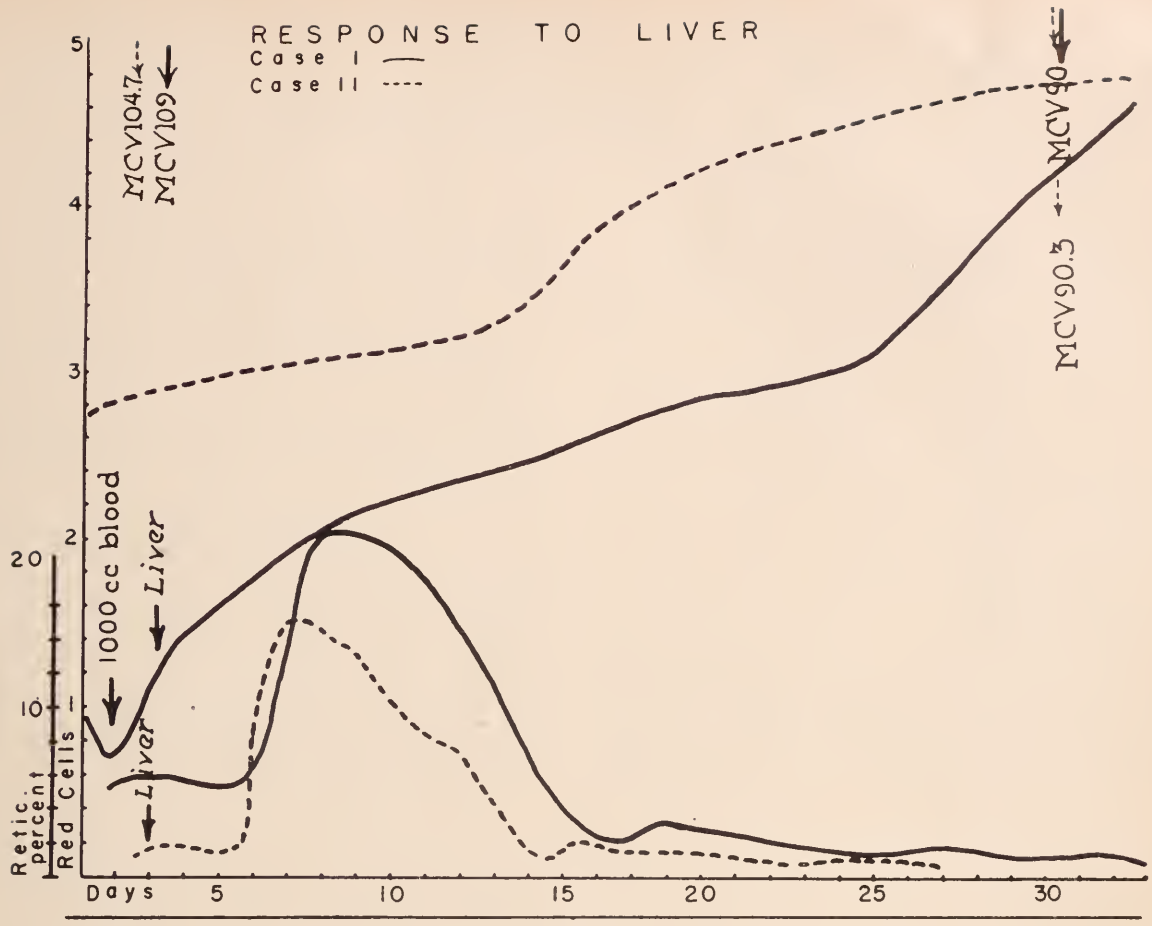


Figure 1.

The second case in this report is that of a 53 year old colored male, with severe combined system disease and pernicious anemia. The case report follows:

A 53 year old colored male entered the hospital complaining of weakness and dizziness. Dyspnea on mild exertion, followed by some swelling of the ankles, had been present two weeks. There was a history of treatment for anemia 14 years ago at Excelsion Springs, which was treated by liver injections. The following year, he entered a Kansas Veterans Administration Hospital, where a diagnosis of pernicious anemia and combined system disease was made. He was instructed to remain on liver therapy, but had not done so. The patient had noted difficulty in walking for about 10 years, using a cane for 5 years, and getting around on crutches for the last three. Other complaints were based on poor control of urination and some difficulty controlling bowel movements. The patient was unaware of any admixture of white blood in the family tree.

Physical examination revealed a well developed and well nourished 53 year old orthopneic colored male. The mucous membranes were pale. The tongue was not smooth nor roughened. The heart was moderately enlarged to the left and there was a soft systolic mitral murmur. Bilateral basal rales were heard over the lung fields. The liver edge was palpable under the right costal margin. The spleen was not felt. Bilateral moderate ankle edema was present.

On neurological examination the Romberg was positive. Vibratory sense was absent in both legs and proprioception markedly diminished. The rectal sphincter tone was poor. Babinski signs were questionable bilaterally. Hematological findings are given in Table 1.

Course: The patient was admitted in congestive failure, which responded to crystodigin and diuretics. The anemia was treated with large doses of reticulogen initially to insure maximum reticulocyte response, and then with twenty units of crude liver three times weekly. The blood count rose from 2.77 million to 4.56 million

Table 1.

	CASE 1	CASE 2
R B C.	.86 million & .64	2.8 million
HB	3 grams 3	9.5 grams
W B C.	7400 6400	600r
Hematocrit	7	30
Reticulocytes	5.3 %	.5%
Differentiol	Normal	Polys. 59, Lymph. 40, Mono 1
Blood smears	Poikilocytes + polychromotophillo anisocytosis	Marked polychromatophilio anisocytosis poikllocytosis
Sickle cells	none ofter 48 hours	none ofter 48 haurs
Gostric onolysis	No free HCL after alcohol & .8mg Histomine	No free HCL ofter Histomine
Marrow	Erythroblostic & megalablastic hyperplasia	Megalablastic ~~erythroblastic~~ hyperplasio
Icterus index	18 units	6 units
Urobilinogen (urine)		Positive in 1:200 dilution
Kohn	Negotive	Negative
Stools	Negative	Negative
Urinalysis	Negative	Negotive
X-roy chest	Moderote cordioc enlorgement	Chest diffused mottling, suggestive of pulmonary edemo
G. I. series	Negotive	Negotive
E. K G	Normol	Normol
Serum Bilirubin	1.9 mg	
Serum Protein	5.2 groms	
Albumen	2.2 grams	
Globulin	2.8 grams	
Sedimentation rote	0 (corrected for onemia)	
Blood sulpho level	Negative	
Blood cultures	Negotive	
Sputo	Negotive	
Skull & long bones	Negotive	
Cepholin Flocculotion	++++	

without iron and the mean corpuscular volume returned to normal. The patient had been bedfast for three weeks prior to entry. After physiotherapy and correction of the anemia, he was able to get along well on crutches. Control of the urinary and rectal sphincters improved.

Comment: The diagnosis of pernicious anemia was established by the presence of macrocytic anemia, histamine refractory achlorhydria, the bone marrow findings and the reticulocyte response of 16% to liver therapy.

SUMMARY

Two cases of pernicious anemia in the negro are presented and the literature briefly reviewed.

Thanks to Mrs. Breckenridge, the Medical Arts Department, Baylor Medical School for the preparation of the charts.

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STERIOD COMPOUND THERAPY

Evaluation of therapy with six steroid compounds (testosterone, desoxycorticosterone acetate combined with ascorbic acid, 21-acetoxy Delta 5-pregnenolone, Delta 5-pregnenolone, 16-dehydro-pregnenolone, and Cortone) in 67 patients with arthritis has been graded according to standards established for the New York Rheumatism Association. Since 33 patients received more than one course of these steroids, comparison of the results was possible.

Improvement occurred in some patients with each steroid, but in no group was the response comparable to that obtained with Cortone. Twenty-two of the 24 patients who received Cortone had previously failed to respond in a satisfactory manned to the other steroids. All patients treated with Cortone developed rapid, significant, objective improvement in their arthritic process. No marked toxicity was encountered during Cortone therapy in this group. *Excerpt: Evaluation of Steroids in Rheumatoid Arthritis, Bernard M. Norcross, M.D., L. Maxwell Lockie, M.D., and John H. Talbott, M.D., Buffalo, N. Y. S. J. M., April 15, 1951.*

Cyst of the Spleen

E. Lee Strohl, M.D. and Francis E. Sarver, M.D.,
Chicago

Large primary cysts of the spleen are uncommon, when compared to cysts occurring in other abdominal organs. A total of 183 cases have been reported.[1] The classification of splenic cysts by Fowler[2] is probably the most complete. Solitary cysts are divided by his classification into parasitic, non-parasitic and dermoid types. The non-parasitic cysts occur more frequently, being further sub-divided into true and pseudo cysts. The true cysts are characterized by the presence of a true epithelial lining membrane. The epithelial lining membrane is not found in pseudo cysts. Pseudo cysts of the spleen are thought to arise from degeneration in a hematoma, or in an area of infarction. Small splenic cysts produce no symptoms. Large splenic cysts produce pain and gastro-intestinal disturbances due to pressure on adjacent viscera.[3, 4]

The diagnosis of large cysts may be suspected by the presence of left upper quadrant pain and a mass. The differentiation of splenic cysts from those of the omentum, pancreas, liver, and kidney must be considered. Bone marrow examinations and careful blood studies are of great importance in determining the nature of the splenic enlargement. X-ray studies reveal displacement of the colon, small intestines, and stomach to the right side of the abdomen.

C. S., a 23 year old white male entered St. Luke's Hospital, Chicago, November 30, 1947. He complained of abdominal swelling, and a mass in the left side of the abdomen. These findings had been present for two years. For two months he had experienced frequent episodes of severe intermittent cramping upper abdominal pain, lasting for several hours, disappearing with bed rest. He gave no history of jaundice, hematemesis or melena.

Physical examination revealed a young, thin, white male weighing 146 lbs. The blood pressure was 120/80 mm. of mercury. The pulse rate was 82 and the oral temperature was 98.8° F. The pertinent physical findings were in the abdomen.

From the Departments of Surgery, St. Luke's Hospital and the University of Illinois College of Medicine.

A protuberant mass filling the left and mid-portion of the abdomen, extending to the left iliac crest was palpable. The mass was firm, not tender and immobile. No fluid wave was elicited.

X-ray examination of the chest revealed an elevation of the left diaphragmatic leaf. The lung fields were clear. An intravenous pyelogram revealed incomplete visualization of the left kidney pelvis, with downward displacement of the left kidney. A scout film of the abdomen revealed a diffuse radiopacity extending throughout the left abdomen, from the elevated left diaphragmatic leaf to the crest of the ilium and extending to the midline. The splenic flexure of the colon was displaced downward and the small bowel displaced to the right.

X-ray examination of the colon, with barium, revealed no intrinsic pathology.

The red blood cells numbered 4,560,000 per cu. mm. The white cells 8,900 per cu. mm. There were 12.9 gms. of hemoglobin per 100 cc. There were no abnormalities of the formed elements of the blood. The platelets numbered 425,210 and 597,420 on two occasions. The acid urine contained 15 mgm/100 cc. of albumin, with no casts or blood cells present. The blood Kahn was negative. The blood urea nitrogen was 17.3 mgm %; the NPN 31 mgm %; the sugar 84 mgm %; the sedimentation rate was 2 mm/hr. Hinton).

A pre-operative diagnosis of cystic splenomegaly was made. On December 8, 1947, the patient was explored under endo-tracheal ether and nitrous oxide anesthesia. A combined abdomino-thoracic approach was made because of the huge size of the tumor. The left diaphragmatic leaf was incised and the tumor mobilized. The tumor was a large cystic spleen, which occupied the left side of the peritoneal cavity. There were numerous dense adhesions between the spleen and diaphragm, and between the spleen and abdominal parietal wall. The splenic pedicle consisted of one artery, 1.59 cm. in diameter, and a single large vein 2.54 cm. in diameter. The vessels in the pedicle were isolated separately, before ligation.

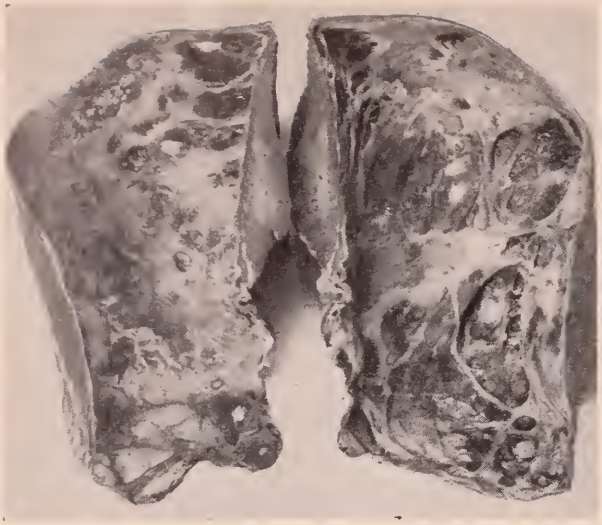


Figure 1 — Cross-section of the cystic spleen. It weighed seven pounds and 12 ounces or 3,376 grams. A shell of splenic tissue is present around the edges.

The patient made an uneventful recovery. He left the hospital on the twelfth post-operative day.

Pathological examination was reported as follows:

"This huge fluctuant tissue included a large spleen and weighed seven pounds and 12 ounces (3376 grams). It was 26 cm. thick, and appeared as though the spleen on the one side was continuous medially along the hilar surface with a cystic structure. After the mass had been fixed, it was cut across in the long dimension and most of the bulk was a huge cyst-like structure with a trabeculated lining. (Figure 1) On the outside, the markedly elongated and thinned out splenic tissue measured at the thickest point 2 cm. At some places the wall of this cyst-like structure was less than 1 cm. in thickness. The cyst contained only clear, serous fluid.

"*Histologic examination* revealed the wall of the sac to be composed of dense hyalinized fibrous tissue. On the lining edge between some of the coarse fibers were small clusters of large mononuclear phagocytes with brown granular pigment. In some of the splenic tissues were also fibrous portions with collections of large mononuclear phagocytes containing brown pigment material. The cyst had no true epithelial lining."

A section of liver tissue taken at the time of operation revealed no significant changes histologically. The pathologic diagnosis was huge pseudo cyst of the hilar tissues of the spleen.

COMMENT

Cysts of the spleen are best treated by splenectomy because enucleation of the cyst is not practical or possible in most cases. True cysts are lined by a specific secreting membrane, either epithelial, endothelial, or by a protoplasmic matrix in parasitic cysts. The false cysts contain no specific secreting lining membrane and are hemorrhagic, serous, inflammatory or degenerative in origin. The true cysts are reported to weigh as much as 6.72 pounds or three Kg. In this case, it weighed seven pounds and 12 ounces or 3376 grams.

SUMMARY

1. A case of a huge splenic cyst is reported. Splenectomy was accomplished by a combined abdomino-thoracic incision.

2. The etiology of non-parasitic cysts of the spleen is not known, though it is thought that they arise as a result of trauma or inflammation.

3. The presence of a cyst of the spleen may be suspected with left upper quadrant pain, and a mass, in the absence of other causes of splenic enlargement. Careful hematologic and bone marrow studies are essential in arriving at the correct diagnosis.

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Emphysema of the Gallbladder

John P. Doenges, M.D. & Bernard A. Weber, M.D.
Olney

The presence of gas in the gallbladder or in the pericholecystic tissue is not an uncommon occurrence, but apparently few of these cases reach the medical literature, as Freidman, et al., have indicated in their recent review of the subject.[1] Gas may enter these structures through an internal biliary fistula, via an incompetent sphincter of Oddi or secondary to an intrinsic infection. In the case reported, infection was apparently the primary etiological factor. In similar types reported, Cl. Welchii has been found as the causative organism in the majority of cases. The clinical course is indistinguishable from those cases of acute cholecystitis which are not characterized by the presence of gas in the gallbladder. The diagnosis is usually established from the radiological examination. The characteristic picture of streaked, bubbly gas within the wall of the gallbladder and in the pericholecystic tissue is pathognomonic. Treatment along conservative lines has been recommended. The use of the antibiotics, supportive measures, and even polyvalent gas gangrene serum have met with the greatest degree of success, whereas surgical treatment has frequently led to further spread of the infectious process.

Case report: This patient, a 62-year-old white female, was admitted to The Olney Sanitarium on October 9, 1949, with the complaints of pain in the upper abdomen, nausea, vomiting, and fever.

The patient had had repeated attacks of right upper quadrant pain associated with nausea and vomiting over a three-year period. She had noticed an intolerance to fried and greasy foods and a gallbladder diet had been prescribed previously by her attending physician. The present attack had begun after an episode of dietary indiscretion one week prior to admission and was similar to her previous attacks, the only significant difference being that the present attack persisted over a longer period and was associated with high fever immediately before hospitalization. The vomitus was green in color and the color and character of the stools had not changed. There was no jaundice.

On examination, the pulse was found to be 94 and the temperature was 101. There was splinting of the right side of the diaphragm. The abdomen was somewhat distended. There was marked tenderness in the epigastrium and right upper quadrant, with some associated muscle spasm. No definite organs or masses could be made out.

The white blood count was 23,950 with 92 per cent polymorphonuclear cells. The erythrocyte count and the urine examination were normal. A scout film of the abdomen taken on October 10, 1949, demonstrated an area of les-



Figure 1.

From The Olney Sanitarium, Olney, Illinois.

soned density at the level of the right 10th intercostal space. This was ovoid in shape and measured approximately 3 centimeters in its largest diameter. This was in the usual location for the gallbladder. No fluid levels or opaque calculi were seen. The area had a feathery appearance. (See Figure 1)

This patient was treated conservatively with penicillin, sedation with morphine, and intravenous infusions of 5 per cent glucose. The temperature subsided in three days and within one week she was entirely asymptomatic. A gallbladder visualization was done one month later and evidence of normal function was demonstrated. She has remained asymptomatic on a strict diet, bile salts, and antispasmodics.

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DRUGGIST SEES GREED ARISING

Speaking before the Medical Society of the State of North Carolina, John W. McPherrin, editor of the American Druggist, reported that greed was showing its ugly head among users of the British national health service. He said:

"Among doctors and pharmacists, I found many who were for the scheme — because they were making more money. These are the mediocre doctors and unsuccessful pharmacists. Among all people—patients, doctors and pharmacists — I was amazed to see human greed showing its ugly head."

Mr. McPherrin pointed out that the human element of acquisitiveness is largely responsible for the many evils of the British system. He warned that in America, where there are many who would transfer that same system here, the danger is equally great. In discussing this factor, he said:

"Perhaps the basic problem is deeply rooted in human nature. It would appear that not every patient, doctor or druggist is as noble and unselfish as the social planners have presupposed. Since those in charge of a Welfare State assume the authority to control any situation, they might shoot the works and issue a decree outlawing all human selfishness. Of course, it won't achieve the miracle, but the idea is no more unrealistic than some assumptions of political humanitarians.

"Failure to realize that human nature doesn't change overnight has created grave problems for the Britons. Those who planned the Walfare State of Great Britain had no idea that their free health scheme was going to reveal so much human greed and selfishness. This characteristic of the human race is present among all people. It is no something peculiar to the Britons. They are no more selfish than we are. The same kind of a free health scheme in America would bring just as much greed to the surface, and result in just as many costly abuses by patients, doctors and druggists.

The American system supplies a natural and effective curb on too much human greed, according to Mr. McPherrin. The social significance of the free competitive system found in American private enterprise, is the basic factor which makes it necessary for Americans to please their fellow businessmen, therefore effectively curbing greed by the creation of less selfish business methods to please the customer.

Mr. McPherrin cites an example:

". . .if a druggist doesn't have the good sense to conduct himself properly, his competitors will soon get his business. We believe that the same principle applies to doctors and hospitals wherever they exist in adequate numbers.

"Without this free competition for the favor of the public, the only alternative is to pass more laws and create more controls in a vain effort to control human nature. It can't be done. Even in a police state, the people merely appear to be under control." *Excerpt: Medical Economics, edited by Committee on Medical Economics, Minn. S. M. A., George Earl, M.D., Chairman, Minn. M., Feb.* 1951.

NEWS OF THE STATE



ADAMS

New Medical Assistants Organization.—A new womans' club in the healing art field, the first of its kind in Illinois, was organized at Quincy on April 23, when a constitution for the new "Medical Secretaries and Assistants Club of Quincy (Ill.)" was adopted. The Club is sponsored by the Adams County Medical Society and the Swanberg Medical Foundation of Quincy. Its principal purpose is to promote educational programs adapted to the work of the members, to promote a closer relationship between members and their employers and to further the relationship of the profession with the public and with the patient.

The officers elected April 23 were: president, Frances E. Simmermacher; first vice president, Lucille Harmon; second vice president, Jeanne Sturhahn; secretary, Alice N. Rupert; treasurer, Lorene M. Coffman, all of Quincy.

BOND

Society Election.—At a recent dinner meeting of the Bond County Medical Society, the following officers were re-elected: Dr. Max Fraenkel, president; Dr. Boyd E. McCracken, secretary-treasurer. Delegate and alternate to the Illinois State Medical Society were Dr. Michael Brand, Sorento; and K. B. Luzader, Greenville, respectively. At this meeting, the society decided to start a rotating on call system, so as to insure the presence of a doctor in the community at times for emergency, when the family doctor is out of town, particularly on Thursday.

CHAMPAIGN

Personal.—Dr. Stephen N. Tager has resigned as radiologist at Mercy Hospital, Urbana, to move to Evansville, Ind., where he will engage in private practice.

COOK

Personnal.—Appointment of Dr. Herbert C. Batson as professor of biostatistics at the University of Illinois College of Medicine was effective May 1. He previously served as director of the biologic products division of the Army Medical Service Graduate School, Washington, D. C. At the University of Illinois, Dr. Batson will be concerned with work in biometrics and design of experiments.

Dr. Stillians Honored.—The Arthur William Stillians Lectureship has been established by the Metropolitan Dermatological Society of Chicago in honor of Dr. Stillians, now professor emeritus at Northwestern University Medical School. Dr. Stillians was head of the department of dermatology and syphilology at the School from 1919 until 1940 and created what was recognized the first postgraduate department of dermatology in Chicago.

Annual Conference on Obstetrics.—The third annual televised postgraduate conference in obstetrics and gynecology, presented by the department of obstetrics and gynecology, Stritch School of Medicine of Loyola University, will be held September 24-28, 1951 at Lewis Memorial Maternity Hospital. The conference will include obstetrical procedures, demonstrations and gynecological surgery. The Radio Corporation of America will again place television screens throughout the hospital. Dr. Herbert E. Schmitz is chairman.

Dr. Stevenson Appointed Cancer Study Coordinator.—Dr. George Stevenson, instructor in Northwestern University's Medical School, has been appointed coordinator of the School's cancer teaching program.

He succeeds Dr. William B. Wartman, chairman of the Northwestern department of pathology, who served as coordinator since establishment of the

program in 1949. Dr. Stevenson previously has served as assistant director of the program.

Dr. Stevenson will supervise teaching of cancer studies in the various departments of the Medical School and will attempt to improve current programs with new research methods.

The program was established through a U.S. Public Health grant of $25,000 in November, 1949, in order that new cancer research findings be introduced into medical studies. The grant was augmented with an additional $25,000 gift in November of 1950.

Grants for Research.—The gift of a $10,000 subsidiary scholarship from Mrs. Sadye Arkin (Flamingo Hotel, 5520 South Shore Drive) in memory of her husband, Harry J. Arkin, was recently announced by President John J. Sheinin, Chicago Medical School. A subsidiary scholarship subsidizes the school for the difference between what a student pays in tuition and what the school must expend for his four years training.—Two gifts from industrial sources for teaching and research have also been received at the Chicago Medical School. Nathan W. Bandler, president of June Dairy Company, New York City, made an initial contribution on behalf of the Board of Directors of his company of 200 shares of Blue Moon Foods, Inc. Sandoz Pharmaceuticals (branch of Sandoz Chemical Works of Switzerland) awarded $250 to Dr. Jay A. Smith, assistant professor of physiology, Chicago Medical School, for continued research on the toxic effects of ergotamine and caffeine.

Society News.—The speakers at the April 25 meeting of the Chicago Rheumatism Society were Dr. William A. Larmon who discussed "Surgical Correction of Deformities of Forefoot from Rheumatoid Arthritis" and Dr. Sid John Shafer on "Pigmented Villonodular Synovitis."

Physical Medicine and Rehabilitation.—Dr. Frank H. Krusen, Rochester, Minn., addressed the Chicago Society of Physical Medicine and Rehabilitation, May 23, on "Ultrasonics in Physical Medicine."

Hospital Intern Day.—Representatives of 33 hospitals in Illinois accepted the invitation of the University of Illinois College of Medicine on May 2 to discuss with interested third-year students the merits and virtues of their hospitals from the standpoint of internships.

This event, known as Hospital Intern Day, is something new as far as the University of Illinois College of Medicine is concerned. However, this same basic idea has been used by high schools for many years in assisting senior students in selecting the colleges which they wish to attend.

Hospital representatives were assigned space at the University where interested third-year students appeared for interviews on a voluntary basis. The students were excused from their classes to participate in the program.

Plans for Hospital Intern Day were formulated following the receipt of a number of letters by Dean Stanley W. Olson from hospitals requesting that they be given permission to send a representative to talk to students who will be applying for internships in the near future.

Since it would not have been feasible nor desirable to have hospital representatives appear at the University of Illinois at various times to address the entire class, it was decided to set one day aside when all hospitals would be given equal opportunity to present the merits of their institutions.

DE WITT

Society News.—The De Witt County Medical Society sponsored a joint meeting of allied professions in Clinton, May 9. Speakers were Dr. Oscar Hawkinson, Oak Park, and Mr. John W. Neal, Chicago, on "Medico-Legal Problems."

MACON

Society News.—Ormand Julian, clinical assistant professor of surgery, University of Illinois College of Medicine, addressed the Macon County Medical Society, in Decatur, April 24, on "Peripheral Vascular Disease."

MADISON

Society News.—Dr. Stanley F. Hampton, St. Louis, discussed "Allergy" before the Madison County Medical Society, May 3, in Edwardsville.

ROCK ISLAND

Society News.—Dr. S. Errico, Moline, was elected president of the Moline Public Hospital medical staff, Dr. M. F. Weissmann, East Moline, vice president and Dr. B. K. Williamson, Moline, secretary. Elected to the executive committee were Drs. R. D. Perkins, Moline, H. C. DeBourcy, Silvis, and L. D. Barding, Moline.

District Meeting.—The annual meeting of the Iowa Illinois Central District Medical Association was addressed in Moline, May 16 by Dr. Raymond O. Muether, St. Louis, on "Jaundice"; and Dr. Lester R. Dragstedt, Chicago, on "The Present Status of Vagotomy in the Treatment of Peptic Ulcer." The September meeting of the society will be addressed by Dr. Justin J. Cordonnier, assistant professor of clinical surgery, Washington University School of Medicine, St. Louis, on "Carcinoma of the Bladder."

SANGAMON

Society News.—"Medical Management of Thyrotoxicosis" was the title of an address before the Sangamon County Medical Society, April 5, in Springfield, by Dr. Edward Biggs, associate professor of medicine, Northwestern University Medical School.—Dr. J. Garrott Allen, associate professor of surgery, University of Chicago, addressed the Springfield Medical Club, April 17, on "Pathological Effects of Atomic Irradiation."—The annual meeting of the Illinois Tuberculosis Association and the Illinois Trudeau Society was held in Peoria, April 16-17. Drs. Darrell H. Trumpe and George H. Vernon participated in a symposium on X-rays; Dr. J. A. Stocker discussed "The Shortcomings of the In-Sanatorium Rehabilitation Program" and Dr. Louis Mark, president, American College of Chest Physicians, Columbus, O., addressed the Trudeau

Society and the Peoria Medical Society on "Pulmonary Lesion with special reference to Loeffler's Syndrome." Dr. Milton Baumann addressed the nurses' luncheon on "Treating the Patient as a Person." On Monday evening, the two tuberculosis groups were addressed by Edward McFaul, known as a "serious-humorist", on "Daily Problems of Mental Hygiene."—Dr. Herbert Rattner, Chicago, addressed the Sangamon County Medical Society in Springfield, May 3, on "What's New and What's True about What's New in Treatment of Diseases of the Skin."

WINNEBAGO

Society News.—Dr. William F. Bethard, Chicago, recently addressed the Winnebago County Medical Society on "Recent Advances in the Diagnosis and Treatment of Cancer."—The staff of the Rockford Municipal Tuberculosis Sanitarium invited the members of the Winnebago County Medical Society to luncheon and a tour of inspection of the new sanitarium, May 11.

HEALTH DEPARTMENT ACTIVITIES

Institutes on Infant Diarrhea.—In an effort to stem the tide of infant diarrhea which is known to have occurred in epidemic proportions 28 times in the last ten years in Illinois, the state Department of Public Health is sponsoring a series of three institutes on this disease.

Invitations from Dr. Roland R. Cross, state health director, have gone out to hospital administrators, directors of nursing services, maternity and pediatric nurses and medical staffs to attend the regional conferences which were held at Mt. Vernon, April 25; Springfield, April 26 and LaSalle, April 27.

"Continued outbreaks of this disease," Dr. Cross stated, "bring sharply to our attention the fact that this infection remains an important cause of morbidity and mortality in full-term and pre-mature infants.

"The need for constant alertness in the application of strong measures of prevention and control is imperative if further outbreaks of this highly communicable disease are to be prevented," he continued.

Recent years has seen a progressive decline in death rates of babies during the first year of life. However, there has been no comparable decline in death rates during the first month of life when diarrhea is most deadly.

"While a considerable proportion of the deaths during the first month of life can be attributed to other causes," Dr. Cross asserted, "it is certain that diarrhea infections are important.

Warning Against Childhood Mumps.—Commenting upon a vaccine for immunization against mumps that has recently appeared on the market, Dr. Leonard M. Schuman, deputy director in charge of the state division of epidemiology, recently stated, "Appearance of this product will undoubtedly lead to demands on the part of parents for immunization of their children against the disease and probably even abuse of the material."

Dr. Schuman declared that "children below the age of puberty should not be immunized. It would probably only postpone the disease to an age when its complications become quite serious."

Mumps is quite benign in childhood, Dr. Schuman explained, but becomes a distinct hazard during puberty and in adulthood. If mumps vaccination produced immunity as durable as smallpox vaccine, it could be recommended for universal use, he added.

At present it is not known how long the immunity from the mumps vaccine will persist, but it is characteristic of such virus vaccines to afford only short-lived protection, according to Dr. Schuman.

"It becomes obvious that to maintain immunity through puberty and adulthood, once the disease was prevented in childhood would require frequently repeated, ever-continuing 'booster shots,'" he said. "The impracticality of such a procedure is immediately obvious."

GENERAL

American College Health Association.—Dr. Richard H. Young, dean, Northwestern University Medical School, was one of the principal speakers at opening sessions of the 29th annual meeting of the American College Health Association, May 3-5, Chicago. Other first-day addresses were delivered by Dr. Irvin W. Sander, Wayne University, president of the association, and Dr. Robert M. Strozier, dean of students at the University of Chicago.

Seven Northwestern University staff members took part in a panel discussion on "Specific Ills Limiting Student Performance", May 5. Participants were Dr. Arnold L. Wagner, instructor in medicine; Dr. Ernest G. McEwen, associate in medicine; Dr. Richard B. Capps, associate professor of medicine; Dr. Martin H. Seifert, associate in medicine; Dr. Meyer Brown, assistant professor of nervous and mental diseases; Dr. Arthur Colwell, chairman of the department of medicine; and Dr. Theron G. Randolph, instructor of medicine.

Other subjects considered by conference delegates included "The Relationship of the Psychiatrist to the College and the Community," "Group Psychotherapy Among College Students," "The Psychiatric Social Worker in the College Mental Hygiene Program," "A Proposed Plan for Followup Studies for Students Who Become Psychotic," and "The Problems of Fatigue in College Students."

Illinois Registration at Louisiana Meeting.—The following physicians from Illinois were registered at the New Orleans Graduate Medical Assembly in New Orleans, March 5-8: Dr. James H. Cravens, Quincy; Dr. John R. DeVelling, Rosiclare; Dr. Robert A. Elliott, Alton; Dr. Clifton E. Harris, Carrier Mills; Dr. Paul C. Hodges, Chicago; Dr. Arvid T. Johnson, Rockford; Dr. Thomas Kelso, Champaign; Dr. J. C. McMillan, Oak Park; Dr. Theron G. Randolph, Chicago; Dr. Harold A. Sofield, Oak Park; Dr. John R. Vonachen, Peoria; Dr. Mark C. Wheelock, Chicago; and Dr. Irwin C. Winter, Chicago.

Special Workshops for Handicapped Children.—Twelve specialized workshops designed for special teachers, therapists, administrators and others directly engaged in crippled children's work, will be held at universities and colleges throughout the country this summer, according to an announcement by the National Society for Crippled Children and Adults.

Workshops in special education, social service, psychology, and cerebral palsy, in addition to special training courses at which staff members of the National Society will lecture, mark the intensive summer training courses. These workshops will be joint projects of state crippled children's societies and the university or college where they are held. State medical societies, public and other private agencies are also cooperating. National Society staff consultants are directing the planning and will participate as speakers.

Planning for the headquarters staff participation is under the guidance of Dr. John J. Lee, dean of the graduate school of Wayne University, Detroit, Mich., former president of the National Society and now a counselor in special education to the Easter Seal Agency.

Dr. Lee has announced there is a great need for professional personnel and that one of the greatest barriers encountered in the various state crippled children's societies and crippled children programs throughout the country is the lack of trained personnel. Thus it is hoped that these workshops will help fill the need for specially trained persons to work with crippled children.

Demonstration classes of crippled children will be part of a number of the workshops in order to give teachers and others an opportunity to observe and work with crippled children. Parent-training programs will also be an integral part of each workshop.

Special education workshops will be held at the University of Utah, Salt Lake City; University of Wyoming, Laramie; Eastern Montana College of Education, Billings; and the New Haven State Teachers College, New Haven, Conn.

Cerebral Palsy workshops will be conducted at Michigan State Normal College, Ypsilanti; Syracuse University's School of Education, Syracuse, N. Y.; and Teachers College, Columbia University, New York City.

"Social Work in Programs for Crippled Children" will be the subject of a workshop to be held at the University of Chicago as a cooperative project of its School of Social Service Administration, the University of Illinois, Division of Services for Crippled Children, and the National Society.

A full day psychology symposium on "The Psychological Problems of Cerebral Palsy" to be held at Chicago's Hotel Sherman will be co-sponsored by the National Society and the American Psychological Association, under joint direction of the latter's Division of School Psychologists and the National Society's program services. The symposium, to be held in conjunction with the APA convention, will mark the first time cerebral palsy has been featured on the organization's convention program.

National Society program consultants will lecture at training courses to be held at Wayne University, Detroit; Western Michigan College of Education, Kalamazoo; and Bowling Green State University, Bowling Green, Ohio.

Further information concerning these workshops may be obtained from the state society for crippled children of the state in which the course will be held, or from the program services of the National Society for Crippled Children and Adults, 11 South La Salle Street, Chicago 3, Ill.

MARRIAGES

Dr. F. Jack Brown, Decatur, to Mrs. Sara Cody Pierce, recently.

Dr. Arthur Hale Curtis, Evanston, to Mrs. Floy H. Watrous, May 26.

DEATHS

Frances E. Drake, Bloomington, retired, Chicago, who graduated at Hering Medical College, Chicago, in 1900, died April 17, aged 96.

Bowman C. Crowell, retired, formerly of Chicago, who graduated at McGill University Faculty of Medicine, Montreal, in 1904, died in Clermont, Florida, April 26, aged 72. He was associate director emeritus of the American College of Surgeons.

Samuel N. Da Costa, Forest Park, who graduated at Chicago College of Medicine and Surgery in 1913, died recently, aged 79.

Max A. Dolnick, Chicago, who graduated at Chicago College of Medicine and Surgery in 1917, died April 19, aged 65.

Samuel S. Epstein, Chicago, who graduated at Chicago College of Medicine and Surgery in 1914, died April 21, aged 61. He was elected to the state legislature from the 19th Senatorial District last November.

Robert James Gay, Chicago, who graduated at Rush Medical College in 1902, died February 25, aged 74.

Theodore Arthur Hopkins, Rockford, who graduated at Northwestern University Medical School in 1942, died January 26, aged 33.

George M. Hamilton, retired, Akin, who graduated at National University of Arts and Sciences Medical Department, St. Louis, in 1911, died April 6, aged 80.

Katharine M. Howell, Chicago, who graduated at Rush Medical College in 1913, died April 27, aged 69.

Philip E. Kimery, Smithshire, who graduated at Barnes Medical College, St. Louis, in 1910, died April 21, aged 68. He died as a result of injuries incurred in an automobile accident. He had practiced medicine in Smithshire for 40 years.

Theodore J. Knudson, retired, Springfield, who graduated at Northwestern University Medical School in 1895, died April 14, aged 82. He came to Springfield in 1911 after practicing in Chicago, and retired in 1940.

Joseph G. Kramer, Macomb, who graduated at Medico-Chirurgical College of Philadelphia in 1899, died January 16, aged 81.

Charles Herbert MacPherson, Morrisonville, who graduated at Chicago College of Medicine and Surgery in 1913, died April 8, aged 65. He had practiced medicine in Middletown, Blandinsville and Auburn before coming to Morrisonville.

Sigmund Mann, retired, Oak Park, who graduated at Chicago College of Medicine and Surgery in 1916, died April 16, aged 60.

Frederick H. Maurer, Peoria, who graduated at Rush Medical College in 1915, died April 22, aged 60. He was head of the childrens department of St. Francis Hospital, Peoria.

Herman Frank May, Chicago, who graduated at the University of Buffalo School of Medicine in 1909, died January 12, aged 68.

William C. McDermott, Peoria, who graduated at Chicago Medical School in 1940, died April 3, aged 40. He was a staff member of St. Francis Hospital and physician for the Bradley University Athletic Department.

George Mueller, Chicago, chief surgeon and chief of staff emeritus at St. Mary of Nazareth Hospital, who graduated at Rush Medical College in 1894, died May 7, aged 83. From 1923 to 1934 he was clinical professor of surgery at Loyola University School of Medicine.

Edward J. Oberholtzer, Williamsfield, who graduated at the University of Illinois College of Medicine in 1993, died May 3, aged 73. He had practiced medicine in Williamsfield for 40 years.

Wilbur F. Spencer, retired, Geneseo, who graduated at Chicago Homeopathic Medical College in 1888, died April 7 in St. Petersburg, Fla., where he was vacationing. He was 87 years of age. He had practiced medicine in Geneseo over 50 years.

Earl R. Steen, Joliet, who graduated at Rush Medical College in 1899, died April 1, aged 77. He had practiced medicine in Joliet over 50 years.

John C. Utter, retired, Mt. Carmel, who graduated at Miami Medical College, Cincinnati, in 1880, died April 14, aged 91. He was a member of the "Fifty Year Club" of the Illinois State Medical Society.

James T. Wyatt, retired, Roanoke, who graduated at Marion-Sims College of Medicine, St. Louis, in 1896, died April 6, aged 83.

Norton Reeme Yeager, Chicago, who graduated at the University of Pennsylvania Department of Medicine, Philadelphia, in 1890, died February 4, aged 81.

"FOR THE COMMON GOOD"

Your Doctor Speaks Over WFJL, Thursday evenings at 7:30 p.m., carried the following transcribed broadcasts under the auspices of the Educational Committee since the last issue of the Illinois Medical Journal:

Elmer E. Swanson, May 10, Spring Fever in Disguise.

Raphael Isaacs, May 17, Leukemia.

Paul F. Fox, May 24, Hernia.

Clifford J. Barborka, May 31, Nutrition.

Here is Your Doctor over WCFL, Saturday mornings at 11 a.m., presented the following physicians in transcribed broadcasts under the auspices of the Educational Committee:

George W. Teuscher, D.D.S., April 28, Dental Caries.

John J. Brosnan, May 5, Blood As a Symptom.

Jerome S. Beigler, May 12, Emotional Maturity.

Lectures Arranged Through the Educational Committee:

Miss Ann Fox, May 8, Rotary Club, in Princeton, on Inside TV, and Woman's Auxiliary to Bureau County Medical Society, Spring Valley, Why Health Education?

Joseph S. Lundholm, Rockford, April 27, Stockton Community Unit, School District, 206, on Medicine as a Career.

The following physicians have participated in the Youth Week Activity of the Chicago Board of Education:

Paul K. Anthony, May 8, Gompers Elementary School, Teen Age Tips on Health.

Lawrence Breslow, May 9, Hayt School, Teen Age Tips on Health and Personality.

Franklin Corper, May 9, Prescott School, Teen Age Tips on Health and Personality.

Arthur W. Fleming, May 9, Taylor School, Teen Age Tips on Health.

Robert E. Lee, May 9, Graham School, Teen Age Tips on Health.

John P. Coughlin, May 9, Jungman School, How Temperamental Are You?

Adrian D. M. Kraus, May 10, Bright School, Keeping Solid with Health.

Jeanne Kehoe Mercer, May 11, Reilly School, Teen Age Tips on Health.

Lectures Arranged Through the Scientific Service Committee:

Harold W. Miller, Chicago, May 8, Bureau

County Medical Society, Spring Valley, Newer Concepts of Obstetric Technique.

John T. Reynolds, Chicago, May 17, La Salle County Medical Society, near Streator, Surgical Diseases of the Gallbladder, illustrated.

Paul K. Anthony, Chicago, May 21, Effingham County Medical Society, Effingham, Influenzo Meningo-Encephalitis with Case Reports.

Arthur J. Atkinson, Chicago, May 29, De Kalb County Medical Society, Sycamore, Physiology of Digestion, illustrated.

George D. Kaiser, Chicago, June 5, Bureau County Medical Society, Princeton, Fluid and Electrolyte Balance in Pre and Postoperative Surgery.

Lucille A. Sprenger, Peoria, July 12, Henry County Medical Society, Kewanee, Education and Treatment of the Diabetic Patient.

HYPERTENSIVE CARDIOVASCULAR RENAL DISEASE

Recent developments in the treatment of essential hypertension have focused attention on the importance of fundus changes in the diagnosis and proper management of this disease. Before describing these changes it should be emphasized that the only requirement for their appearance is an elevated blood pressure. Although the etiology of hypertension is varied, manifestations in the fundus are in no way characteristic of any type of hypertensive disease. Observations of the fundus provide important information which should be correlated with other clinical and laboratory data to evaluate accurately the disease as it affects the individual patient. Periodic fundus examinations should be routine on all patients who have an elevated blood pressure. *Excerpt: Ocular Fundus Manifestations of Hypertension and Diabetes, Mortimer Mann, M.D., Indianapolis, J.I.S.M.A., March, 1951.*

CARCINOMA OF THE GALL BLADDER

At present, the only hope for decreasing the deaths from carcinoma of the gallbladder is by cholecystectomy before carcinoma develops in patients with gallstones. Some advocate this in all patients with stones in the absence of definite contraindications to surgery. *Excerpt: Carcinoma of the Gallbadder and Extrahepatic Bile Ducts, Newell E. Wood, M.D., Minneapolis, Minn., The Journal-Lancet, Mar. 1951.*

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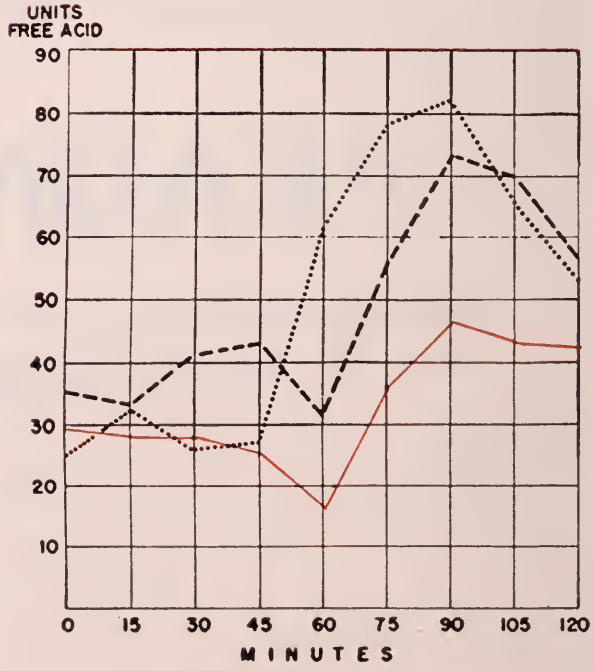
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"They felt better, ate better and gained weight. The majority took the tablets well and there were no complaints regarding constipation or diarrhea."

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*Steigmann, F., and Schlesinger, R. B.: A Resin-Gastric Mucin Mixture in the Medical Management of Peptic Ulcer, American J. Dig. Dis. *17*:361-365 (Nov.) 1950.

**Scientific Exhibit of the A. M. A., Atlantic City Session, 1949.

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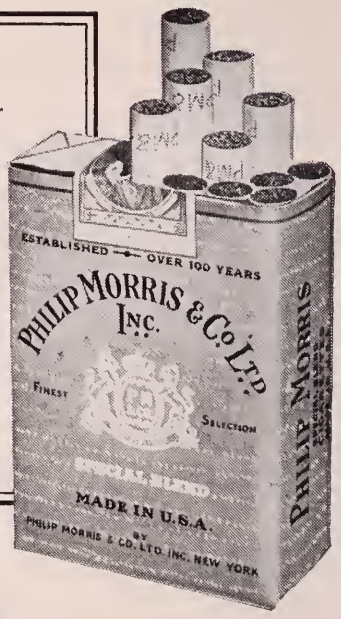
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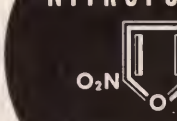
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Neustaedter, T.: Am. J. Obst. & Gynec. 46:530 (Oct.) 194

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PHYSICAL MEDICINE ABSTRACTS



ELECTROPHRENIC RESPIRATION

In THE LANCET, No. 6633, p. 473, October 14, 1950.

A vast public still is fascinated by the ingenious "iron lung" devised in 1929 by Drinker and Shaw for "prolonged administration of artificial respiration." This apparatus is alternately the hope and the despair of the clinician called on to treat bulbar or bulbospinal poliomyelitis with respiratory failure. He can rarely prophesy whether the treatment will be: (1) a brilliant success, tiding the patient over a difficult period until use of the respiratory muscles is restored to him; (2) a comparative failure with a hopelessly paralyzed patient depending on the respirator for continued existence; or (3) a complete failure, giving little or no relief because of an obstructed airway or concomitant paralysis of the respiratory center. Many of these cases are complicated by pharyngeal or laryngeal paralysis, and the consequent pooling of mucus leads to obstruction of the respiratory passages. Under these conditions the violent inspirations induced by the respirator give rise to a negative pressure in the bronchioles and alveoli, into which plasma and red cells are sucked, producing hemorrhagic pulmonary edema. To ward off this danger respirator treatment may be combined with postural drainage and suction.

A new and apparently effective method of meeting this difficulty is now described by a Boston team under the leadership of Sarnoff. Patients with irregular, shallow, spontaneous respiration who failed to adapt their breathing to the respirator's rhythm have been submitted to this stimulation for periods varying from eight hours to several days. It seems that, even after a few hours, spontaneous respiration may be greatly improved, but in the worst cases stimulation may have to be continued for some time before the respiratory center has sufficiently recovered.

VIROLOGY OF POLIOMYELITIS

Charles F. Pait, M.D., Los Angeles. In CALIFORNIA MEDICINE, 73:5:391, November 1950.

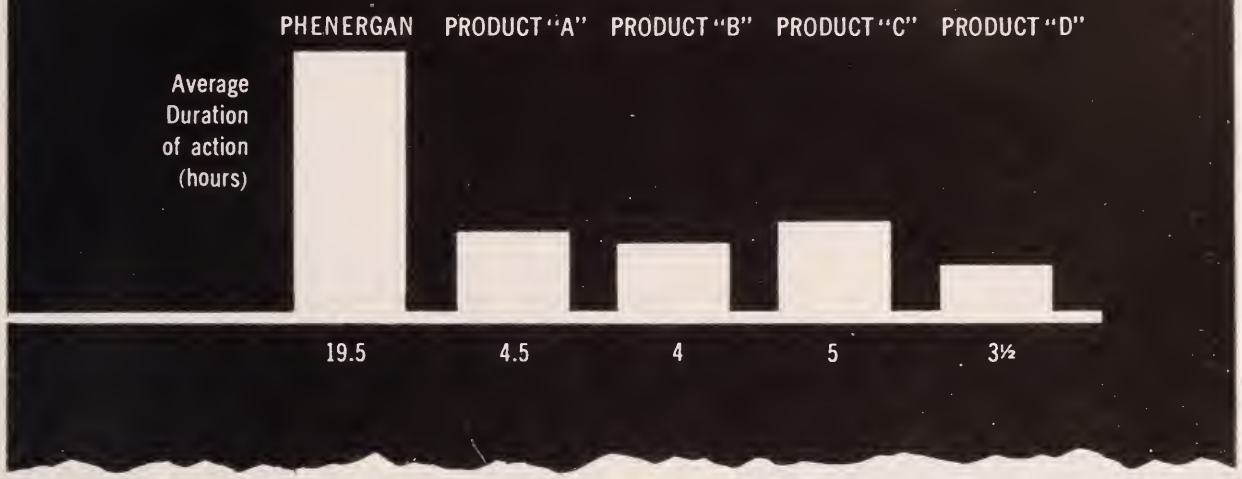
The virus of human poliomyelitis has been demonstrated in excretions before onset of the disease, during the disease, and in convalescence. It may be confused with different viruses likely to be found in the same sources in clinical conditions resembling poliomyelitis.

Immunologic differences between strains of poliomyelitis virus have been detected so that three types are now evident. The distribution of these types and their importance as causes of

(*Continued on page* 54)

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The only important side effect, drowsiness (1 out of 5 cases), is a distinct advantage in the bedtime dosage regimen. The antihistaminic action persists long after the soporific effect has worn off.

1. Shulman, M.R.: Ann. Allergy, 7:506, 1949.

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epidemics are not known. This multiplicity of immunologic types is an important factor in considering immunization of humans. Commercial manufacture of vaccines faces many technical problems.

Recently the Coxsackie virus has been demonstrated in humans with a disease closely resembling poliomyelitis.

DIAGNOSTIC PROBLEMS IN POLIOMYELITIS AND HOW THEY ARE MET

A. C. Bower, M.D., Los Angeles. In CALIFORNIA MEDICINE, 73:5:394, November 1950.

A brief review of salient facts pertaining to poliomyelitis is presented.

During epidemics, physicians are more alert to the probability of the occurrence of the disease, and increasing experience at such times sharpens diagnostic acumen.

At present there is no method by which abortive poliomyelitis may be accurately diagnosed. Diagnosis must rest purely upon epidemiological grounds, suspicion, and inference.

TREATMENT OF POLIOMYELITIS WITH INVOLVEMENT OF THE RESPIRATORY SYSTEM

Harold E. West, M.D., Los Angeles. In CALIFORNIA MEDICINE, 73:5:397, November 1950.

The mortality rate of poliomyelitis may be reduced by early measures to prevent anoxia and its subsequent complications.

Constant nursing care, early tracheotomy, the giving of oxygen, proper use of the respirator and positive pressure equipment are essential in the proper management of patients with poliomyelitis who have respiratory involvement.

In the management of the respirator patient, it is extremely important that physicians and nurses secure the patient's confidence.

CREATINE EXCRETION IN ACUTE POLIOMYELITIS: PRELIMINARY REPORT

George J. Boines, M.D., and James C. Kakavas, Ph.D. In DELAWARE STATE MEDICAL JOURNAL, 22:10:304, October 1950.

It appears from the preliminary data that daily creatinuria evaluations in 24 hour specimens of urine, done from the onset of acute poliomyelitis, can be of value in determining the cessation of muscle pathology, rigidity, atrophy, and/or the reestablishment of normal nutrition and metabolism. Therefore, active therapy directed toward the correction of the pathologic physiology in the muscles should perhaps be continued until creatinuria diminishes or disappears.

PHYSICAL MEDICINE AND REHABILITATION: THE PROBLEMS OF EDUCATION

Howard A. Rusk, M.D., New York. In ARCHIVES OF PHYSICAL MEDICINE, 32:3:137, March 1951.

In the undergraduate, graduate and postgraduate teaching in physical medicine and rehabilitation we cannot emphasize too strongly that the underlying fundamental is the teaching of good medicine. This is difficult, for the specialists in our field must have at least a basic understanding of medical, surgical, orthopedic, neurological and psychiatric problems, both diagnostic and therapeutic. We cannot accept without question the diagnosis, evaluation and therapeutic prescriptions of our colleagues without a reevaluation if we are to accept the responsibilities of specialized care. The surgeon does not operate on the diagnosis of the internist without himself examining the patient. This is true throughout all of medicine where good medicine is practiced. We must stand on the same firm cornerstone.

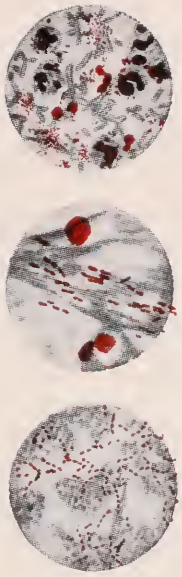
We must also remember, in discussing both education and the practice of physical medicine and rehabilitation, that this is a combined specialty. There will be some in the specialty whose primary interest is in physical medicine as it obtains to the routine treatment of acute conditions as well as to the rehabilitation of the disabled. There are some whose primary interest is in the problems of rehabilitation, taking into consideration the medical, psychological, psychiatric, social, vocational and all other aspects that have to do with the total rehabilitation of the individual.

When the physician is capable of standing his ground in medicine generally and can add to this the special technics and modalities pertinent to his particular field, he is then a specialist, not only in name but in reality.

(*Continued on page* 56)

A broad antimicrobial spectrum:

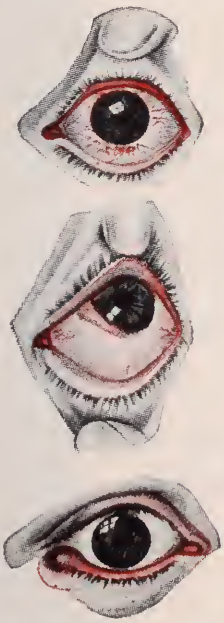
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Physical Medicine (Continued)

THE PROBLEM OF GOUT

George R. Dillinger, M.D. In THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA, 40:3:114, March 1951.

Gout is probably one of the most neglected disease syndromes in the field of American medicine, yet is one of the oldest diseases known to man.

The treatment of an acute attack of gout, after recognition, usually is a simple matter. Very few articular diseases will respond so promptly.

The affected part should be put at complete rest. Hot or cold wet compresses give some measure of relief. If the pain is too severe, morphine or codeine should be used. Most authorities agree upon the treament for acute gout, but there is some disagreement concerning the interval treatment or management between attacks. Some feel that moderate dietary restriction and avoidance of the use of alcohol is all the treatment indicated. The majority, however, feel that the gouty state can be combatted and the development of deforming arthritis checked by a definite treatment regimen, consisting of (1) moderate living, with adequate rest; (2) a low purine, low fat diet; (3) colchicine, and salicylates with alkali, and (4) abstinance from alcoholic beverages. This treatment also is useful after gouty arthritis has developed. In addition, heat and moderate massage with active and passive joint activity should be used.

LESIONS OF THE SHOULDER

Paul L. Rieth, M.D., Atlanta. In THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA, 40:2:69, February 1951.

The majority of shoulder lesions are lumped under the term "bursitis." In reality, primary subedeltoid bursitis, *per se,* is a rare entity and as generally employed, is a misnomer. Equally misleading terms in common usage are periarthritis, neuritis, tendonitis, and calcified bursa.

As Codman and others have pointed out, the majority of shoulder lesions are degenerative

(Continued on page 58)

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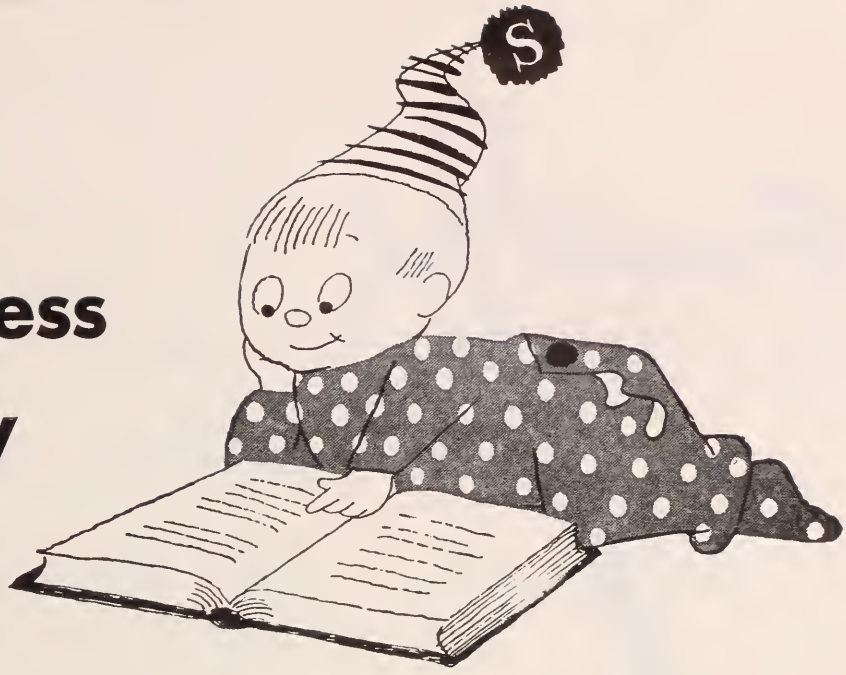
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Brand of Dihydroxy Aluminum Aminoacetate

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Success story



Similac, by providing 50 mg. ascorbic acid to the reliquefied quart, can successfully assist in the protection of the infant not only against scurvy but also against serious hematopoietic deficiencies. Behind this "success story" are some pertinent facts:[1]

1. *Clinically,* megaloblastic anemia in infants is often associated with vitamin C deficiency.
2. *Experimentally,* if vitamin C was inadequate for long periods, the test diets all resulted in megaloblastic anemia.
3. *Because* deficiency of vitamin C leads to a disturbance in folic acid metabolism.
4. No cases of megaloblastic anemia have been known to occur among infants fed vitamin C-fortified Similac.
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there is no closer equivalent to human breast milk than

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1. May, C. D.; Nelson, E. N.; Lowe, C. U.; and Salmon, R. J.: Am. J. Dis. Child. *80*:191 (Aug.) 1950.

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Physical Medicine (Continued)

and/or traumatic in origin; and the anatomic site of the primary pathologic process is most often found within the tendons of the scapular muscles; e.g., the tendons of the supraspinatus, infraspinatus (and teres minor), and subscapularis muscles which together form a tendinous hood or cap on the head of the humerus.

Shoulder lesions manifest themselves by pain, limited joint movements, muscle spasm, and areas of tenderness. The tender area most often delineated by the patient is near the insertion of the deltoid muscle.

The shoulder movements showing greatest restriction are abduction and external rotation, as performed in placing a hand to the posterior neck region. Shoulder lesions are seen most frequently in patients over 35 years of age. Under 35 years of age, there usually is a definite history of single or oft-repeated trauma associated with the onset.

Graduated and guided active muscle exercise is the most useful single conservative therapeutic aid. Massage, heat, etc., are of less importance. X-ray therapy occupies an intermediate and ill-defined status at present. Manipulation is mentioned only for condemnation since unpredictable tearing of tissues is inevitable.

Curative therapy for approximately 20 per cent of shoulder lesions is surgical.

MULTIPLE SCLEROSIS—ITS DIAGNOSIS AND TREATMENT

A. B. Baker, M.D. In THE WISCONSIN MEDICAL JOURNAL, 50:3:245, March 1951.

Multiple sclerosis is a fairly common chronic disease of the nervous system of undetermined etiology. It is a disease of the younger age group, over 75 per cent of the patients being between the ages of 20 and 40 years.

Because of the variable nature of this disease, it is extremely difficult to describe the clinical features of this illness, since rarely are two cases similar.

In spite of the fact that there is, at present, no specific treatment for multiple sclerosis, the physician actually finds himself in no different position than he does in many other medical diseases.

Physical therapy is of utmost importance in

(Continued on page 64)



. . . new oral penicillin fully effective in 3 to 4 doses daily

White's

DRAMCILLIN-250

250,000 units* in a teaspoonful. Pleasant tasting. In adults, 500,000 units given at 6 to 8 hour intervals is effective, avoids interruption of sleeping and eating schedule and maintains fully adequate blood levels. In infants under one year, half the above dosage is suggested. 60 cc. bottles 3,000,000 units.*

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WHITE'S DRAMCILLIN — 100,000 units* in a teaspoonful

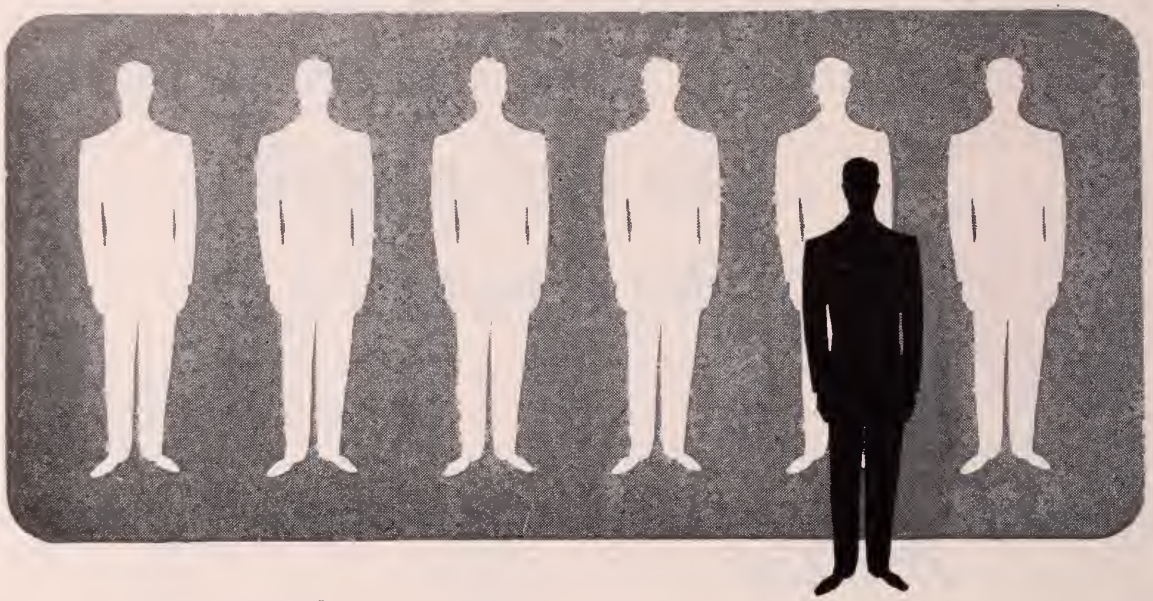
WHITE'S DRAMCILLIN WITH TRIPLE SULFONAMIDES — 100,000 units* plus 0.5 Gm. mixed sulfonamides in a teaspoonful

WHITE'S DROPCILLIN — 50,000 units* in a dropperful

*Buffered Penicillin G Potassium

WHITE LABORATORIES, INC., **Pharmaceutical Manufacturers, Kenilworth, N. J.**

In one out of six patients



no symptoms

but *all* 34 patients in this study carried Endamoeba histolytica[1] in their stools! Five were classified as asymptomatic and 18 were "persons with such poorly defined symptoms that they would not normally seek medical assistance...," but a stool examination proved that all had amebic dysentery.

In these instances, a course of treatment with Milibis-Aralen was completely successful. Milibis — bismuth glycolylarsanilate — a new intestinal amebacide, is one of the most powerful of the drugs commonly used against Endamoeba histolytica.[2] Yet its toxicity is so low that side effects are virtually unobserved.

Aralen (chloroquine) diphosphate has been shown to exert a specific action on extra-intestinal amebiasis. The combination of Aralen with a superior intestinal antiamebic drug such as Milibis furnishes adequate treatment of any amebic infection.

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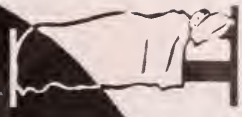
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1. Towse, R. C., Berberian, D. A., and Dennis, E. W.: *New York State Jour. Med.*, 50:2035, Sept., 1950.
2. Berberian, D. A., Dennis, E. W., and Pipkin, C. A.: *Am. Jour. Trop. Med.*, 30:613, Sept., 1950.

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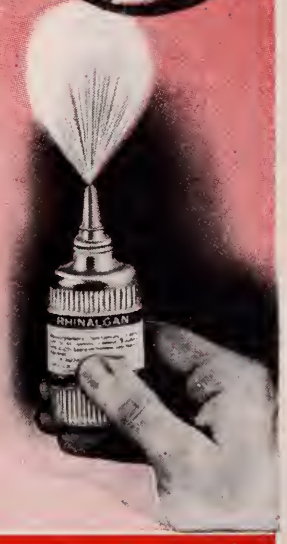
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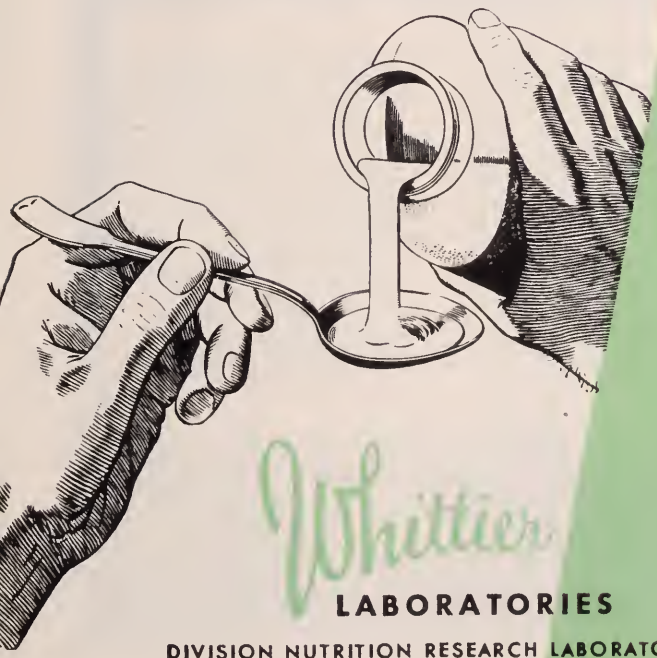
Turicum provides lubricoid softness *without oil*—an ideal which has been the therapeutic aim in constipation management for decades.

The unique lubricoid action of Turicum is based on its administration as the fluid gel of methylcellulose, with magnesium hydroxide in less than laxative dosage to maintain continued hydration within the bowel.

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Turicum is easy to take—palatable, non-bloating—does not interfere with absorption of oil-soluble vitamins. Average dose: One or two tablespoonfuls at bedtime, followed by a full glass of water.

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the treatment of multiple sclerosis. It is not aimed at altering the pathology or the course of the illness but merely to direct the patient as to how to handle himself in spite of his disabilities and to use his residual capacities to the fullest extent.

Immobilization should be avoided in this disease. The patient should be encouraged to be active in spite of his limitations. Inactivity on the part of these patients will greatly increase their limitations and will hasten complications, such as pneumonia, bed sores, contractures, and so forth. On the other hand, the activity of the patient never should proceed to a point of physical exhaustion. These patients must be guided to maintain their activity within their capabilities.

Specific physical therapy procedures can be aimed at strengthening the remaining musculature, training other intact muscles to perform substitute movements for involved musculature and the application of such devices as braces, crutches, and so forth, to help compensate for the various disabilities.

Although there is no specific treatment for this disease, the patient should be treated symptomatically and should be taught to adjust to his disabilities.

Stress situations should be avoided in multiple sclerosis, since they tend to aggravate the course of the illness.

EXPERIENCE WITH CORTISONE IN THE TREATMENT OF RHEUMATOID ARTHRITIS

Paul J. Bilka and Gordon Cader, Minneapolis. In POSTGRADUATE MEDICINE, 9:3:231, March 1951.

The authors describe their clinical experience in the treatment of rheumatoid arthritis with cortisone. Several dosage schedules were used in an attempt to produce more lasting benefits from this powerful and dramatic agent.

Cortisone Combined with Intensive Physical Therapy: It has been a common observation for patients with mild or recent flexion contractures of various joints to find these previously

(Continued on page 66)

New LEVERAGE FOR CONTROL



of Certain Heart and Respiratory Disorders

Dorsaphyllin now affords the therapeutic action of theophylline, *buffered by sodium glycinate to reduce gastric irritation.* With gastric acidity thus neutralized and precipitation of theophylline in the stomach prevented, the buffered drug is well tolerated in larger doses. In addition, having neither enteric nor sugar coating, Dorsaphyllin tablets disintegrate rapidly in the stomach and absorption begins immediately. By permitting the physician a freer hand in determining dosage, and by removing the obstacle to prompt therapeutic response, Dorsaphyllin brand of theophylline-sodium glycinate is providing new leverage in the management of such disorders as congestive heart failure, Cheyne-Stokes respiration, bronchial asthma, and status asthmaticus.

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From The Literature

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- Paul and Montgomery, J. Iowa State Med. Soc., June, 1948.
- Krantz, Holbert, Iwamoto and Carr, J.A.Ph.A., Vol. 36, pp. 248-250, 1947.
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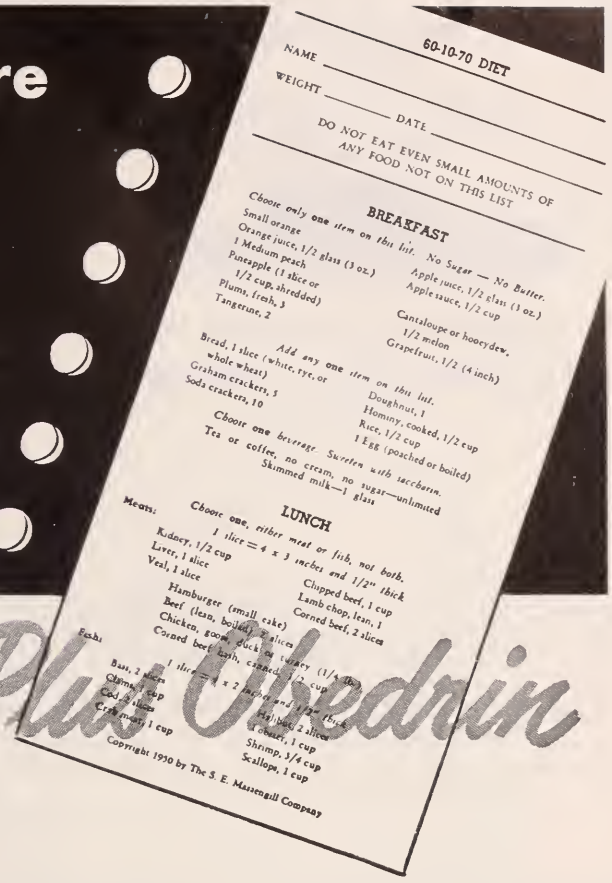
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Physical Medicine (Continued)

deformed joints straightened out and returned to a normal range of motion often within a matter of days after the initiation of cortisone therapy. More severe or long-standing contractures, however, are only partially relieved. In these instances, physical therapy is of special value. The marked reduction in the active rheumatoid process due to cortisone allows for more intensive physical therapy measures. Joints can be manipulated with the production of much less pain and muscle spasm. The patient can more actively participate in muscle straining.

So convinced are the authors of its value, that physical medicine has been made an integral part of the program of almost all patients to whom they have given cortisone.

Case reports are given, one of which illustrates the value of combined cortisone and physical therapy with the maintenance of a mechanical gain, despite the recurrence of the active rheumatic symptoms on cessation of cortisone.

In another case report, the lessened pain and muscle spasm, and greater ease of carrying out physical therapy during the first of two hip cup arthroplasties when cortisone was used, as compared with the second arthoplasty when cortisone was not used, were ver apparent.

REHABILITATION OF POLIOMYELITIS PATIENTS

George G. Deaver, M.D., New York City. In POSTGRADUATE MEDICINE, 9:2:155, February 1951.

The physician must assume the responsibility for the patient until he attains the maximum functional capacity to meet the demands of daily living and working. To attain this objective may require years of supervised treatment, in all stages of the disease.

The Acute Stage: After admission to the hospital, the usual method of treatment for a patient with poliomyelitis is as follows: (1) Maintenance of proper fluid and food intake and elimination of body wastes. (2) Proper lying position in bed. Prevention of prolonged back lying. (3) Relief from pain and tenderness. Drugs are not effective and often dangerous. Moist heat in the form of hot packs tends to relax tense muscles and relieve pain. (4) Passive stretching is started as early as possible.

(Continued on page 70)

Interest in life and living

When the patient settles down to "the completion of life", depression can so easily get the upper hand. The seemingly endless, daily routine of living is approached with apathy, inertia and lack of interest; and the patient's own outlook on life drags her down the path to eventual break-up—physical as well as mental.

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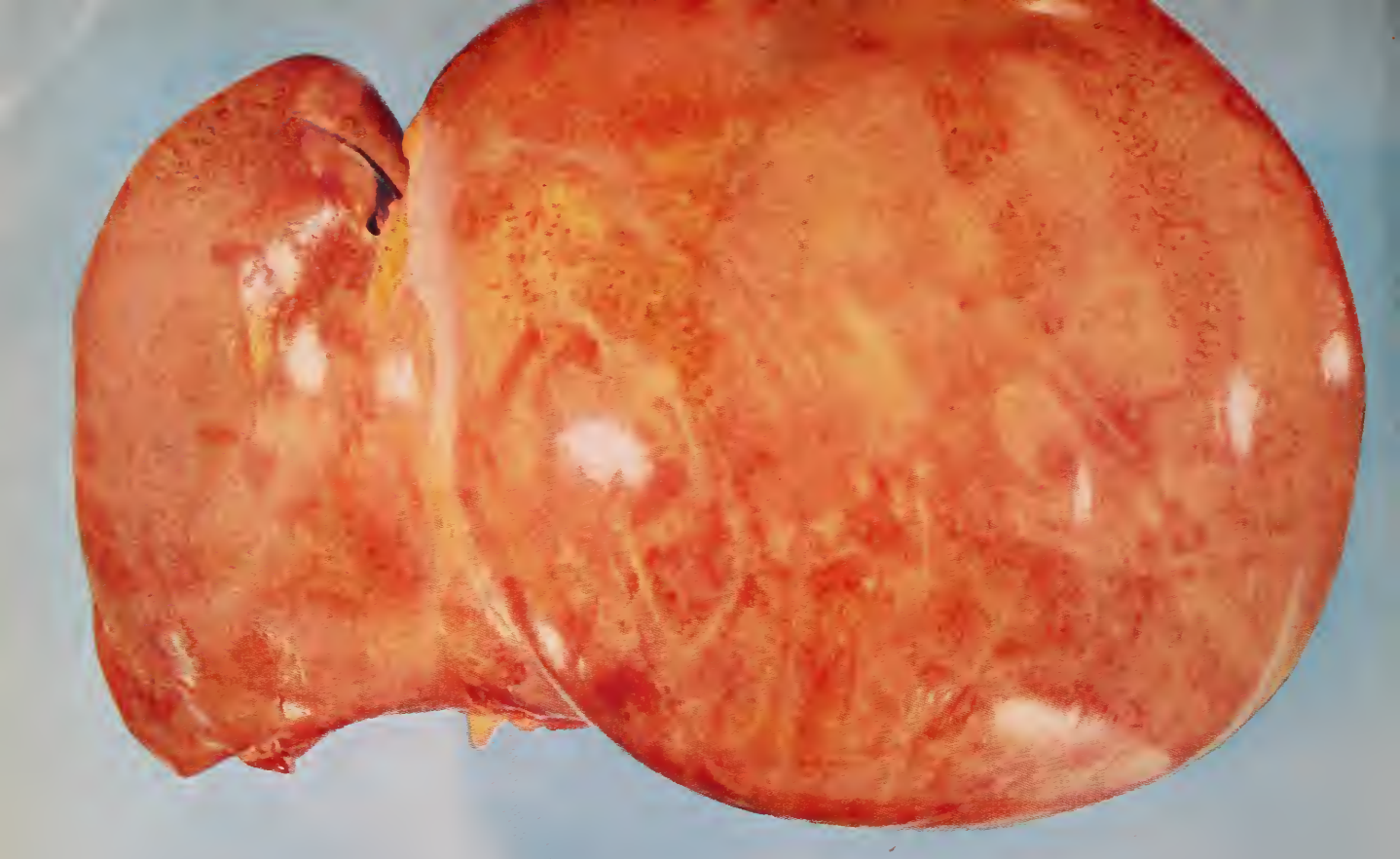
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*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.





Actual photograph of a liver (weight, 2800 grams). The underlying parenchyma is greasy and diffusely orange-red. Pathologist's diagnoses: "obesity; left ventricular hypertrophy; pulmonary edema and congestion; fatty infiltration of liver; fatty infiltration of pancreas."

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Weight reduction—of even a few pounds—is often the surest means of lengthening life and diminishing future illnesses.

'Dexedrine' Sulfate curbs appetite, makes it easy for the patient to adhere to a low-calorie diet and thus to reduce weight safely—without the use (and risk) of such potentially dangerous drugs as thyroid.

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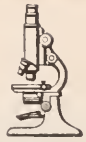
Thus, the need for correct fitting and a *wide range of diaphragm sizes* is evident. A diaphragm which is too small or too large will not block access to the cervix along the anterior wall.[2]

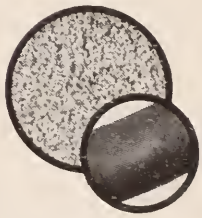
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1. Clark, Le M.: The Vaginal Diaphragm. St. Louis, C. V. Mosby Company, 1938, p. 43.
2. Dickinson, R. L.: Techniques of Conception Control. Baltimore, Williams & Wilkins Company, 1950; p. 17.





Unretouched photamicragraph of the dome (enlarged 10 diameters) and the rim (inset) of a "RAMSES" Flexible Cushianed Diaphragm.



Unretouched phatamicrograph of the dome (enlarged 10 diameters) and the rim (inset) of a conventianal-type diaphragm.

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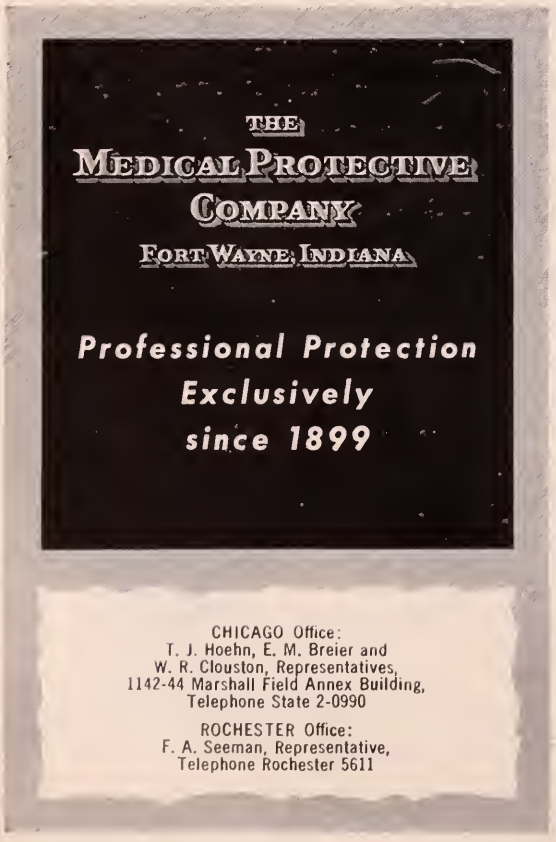
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Wm. L. Brown, Jr., M.D.



Physical Medicine (Continued)

The parts of the body should be moved gently, stopping before the patient has pain and before there is muscle spasm.

The Convalescent Stage: When pain and tenderness are no longer present, the second step in the treatment program is to (1) evaluate the return of muscle strength, (2) start muscle reeducation to the weak muscles, and (3) prevent deformities.

The Chronic Stage: After a period of approximately two years, we can expect no further return of muscle strength. If the patient has received adequate medical and physical treatment there are not likely to be any deformities. The treatment at this stage is to teach the patient, by means of braces, crutches, gadgets and the remaining muscle strength, to perform as many as possible of the activities necessary for daily living and working.

STRENGTH OF HEALING IN TENDONS OF DENERVATED MUSCLES

Benjamin F. Lounsbury, M.D. In QUARTERLY BULLETIN OF NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, 25:1:47, Spring 1951.

Lacerations of tendons occur relatively frequently among the injuries sustained by men who work with their hands. Such wounds, often seemingly trivial, usually not spectacular, may rob a man of his means of livelihood. It is no wonder then that the processes by which wounded tendons may be restored to normal function should have been studied extensively. One of the most important investigations of tendon healing within recent years was carried out by Mason and Allen. They produced experimental evidence to show that the tensile strength of healing tendons is greatly enhanced by permitting some function of those tendons in the later stages of their healing.

The experiments performed in this investigative study have demonstrated the effect of tonus on the tensile strength of healing tendons. They also have demonstrated the changes which occur in a muscle following the division of its nerve supply and have shown the nature of the reparative process in the tendon of such muscle. From these demonstrations, the following conclusions have been drawn:

(1) If the tonic contractions of a muscle be abolished by denervation of the muscle, healing

(*Continued on page 72*)



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As a scabicide, Kwell Ointment leaves nothing to be desired. Its rate of cure is high—over 90%—on a single application. It is non-irritant and does not leave a contact dermatitis in its wake. It is clean—greaseless and pleasantly scented—and does not stain clothing or bed linen. It may be used in the presence of secondary infection without fear of undesirable side actions. It is usually effective when other scabicides fail.

As a pediculicide, Kwell Ointment performs equally well. It is promptly destructive for every type of louse which infests the human body.

Kwell Ointment contains 1 per cent of the gamma isomer of benzene hexachloride in a vanishing cream base. Its active ingredient is highly lethal for the Sarcoptes scabiei and pediculi, but in the concentration employed is non-toxic for man. Kwell Ointment is available on prescription in 2 oz. and 1 pound jars. The former is usually adequate for one patient.

***REFERENCES**

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2. Wooldridge, W. E.: Personal Communication.
3. Niedelman, M. L.: J. Pediat. 32:566 (May) 1948.
4. Cannon, A. B., and McRae, M. E.: J.A.M.A. 138:557 (Oct. 23) 1948.
5. Appel, B.: New England J. Med. 243:74 (July 20) 1950.

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of its tendon following primary suture is appreciably weakened.

(2) The tensile strength of the "denervated" healing tendon may be restored to that of the healing tendon of a normal muscle by restoring the pull of tonic contractions on its proximal stump.

(3) Passive movement of a healing "denervated" tendon greatly increases its strength.

DIAGNOSTIC SCREENING, ADMISSION AND FOLLOW-UP IN ACUTE STAGE

Alex J. Steigman, M.D. In HOSPITALS, 25:3:44, March 1951.

Diagnostic screening is a clinical rather than an institutional problem. Admissions should be a medical rather than an institutional probelm, and they should be confined to those patients for whom the "gain of hospitalization is worth the pain." Patients severely paralyzed, those with severe pain, or those with respiratory and bulbar or urinary complications, should make up the patients primarily considered for admission to hospitals except for those mildly ill patients who live in such remote places as to be away from adequate medical and hospital care.

Follow-up arrangements in the acute stage involve the linking together of a number of interested parties. For this, the intelligent liaison work of the modern medical social service worker is of paramount importance.

In the wake of an epidemic, the handling of such patients in groups and clinics for follow-up arrangements is frequently more feasible and desirable than any other arrangement.

PLANNING FOR HOME-CARE TREATMENT

Emil D. W. Hauser, M.D. In HOSPITALS, 25:3:47, March 1951.

The ultimate goal of treatment for poliomyelitis is the rehabilitation of the individual. To assure this goal, home care treatment is essential, and unless treatment in the hospital is followed up by a program of treatment in the home, the benefits of hospital care could be lost.

There is an emotional and psychological improvement with the return of the patient to his home, after the original adjustment has been made. Also, there are more opportunities for doing functional exercises in the home than in the hospital. Readjustment of the patient to his normal environment is aided by home care, and since the objective in all cases is rehabilitation of the individual to normal, we want them in their normal environment as soon as this is feasible. During the hospitalization the aim is to secure the maximum benefits of hospital care in as short a time as possible. This necessitates the concerted efforts of the orthopedist, physical therapists, occupational therapists, nurses, medical social worker and others on the hospital staff.

The greatest problems in the care of poliomyelitis are presented by the respirator cases and those patients who are so severely paralyzed as to be totally dependent. When the point is reached where the improvement from hospital care is no greater or is not so great as the improvement which would be obtained if the patient were at home, these patients should be selected for home care.

Home care requires teaching parents or other members of the family to follow through with the treatment which was initiated in the hospital. Before the patient leaves, specific instructions are given for the parent's part in the program of home care. This includes the exact way of carrying out exercise, the amount of exercise to be allowed, the amount of rest which is required, and control of the diet and administration of tonics. This is accomplished through a conference of parents, physician and physical therapist.

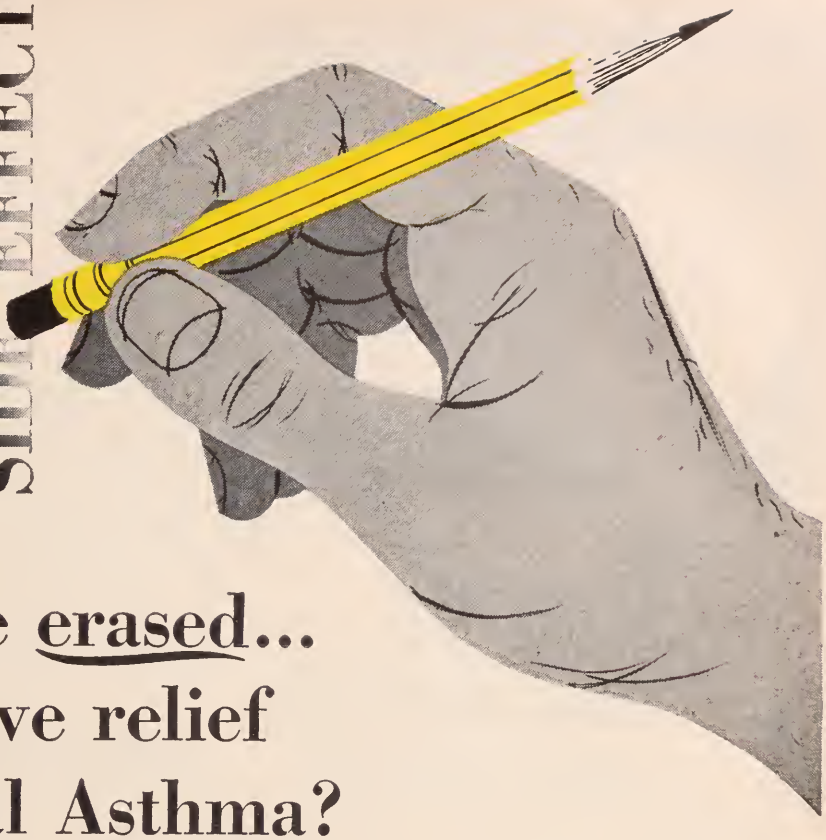
Contact with the personnel that gave attendance at the hospital is continued, for those who can be transported, through the outpatient department. Muscle tests are made as necessary, progress is recorded, exercises are checked and further treatment is prescribed and taught the patients. These periodic check-ups assure continued progress.

In some cases where the patient is completely home-bound, visits are made to the home by the medical social worker, the physician and the physical therapist. Close coordination must be maintained between the medical staff of the hospital and the physical therapy staff of the Visiting Nurse Association.

As the patient becomes ambulatory it is more economical to provide treatment at a central establishment such as a rehabilitation center or

(Continued on page 74)

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[1]Hansel, F.K.: Ann. Allergy, 5:397, 1947



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1. Hoffman, Murray M., Ill. Dent. Jl., 19:439-445 (Oct., 1950)

2. McNealy, Raymond W., Ill. Med. Jl., 97:150 (Mar., 1950)

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Physical Medicine (Continued)

a Visiting Nurse Association treatment center.

In some cities the public school system and the parochial schools provide special teachers for the continuance of education of the child while he is in the hospital and while he is confined to his home. Later, the schools for crippled children are a great asset.

Occupational therapy also is started at the hospital and continued at home. It frequently is a very important factor in recovery of function.

All of the factors in the home care program are coordinated through the medical social service department. If this type of organization is not available, the problem can be met adequately, particularly on a smaller scale, if the family is properly trained, if the patient's care is followed up at home, and if sustained interest is shown until such time as the patient has become totally rehabilitated.

REHABILITATION SERVICES FOR THE POLIO PATIENT

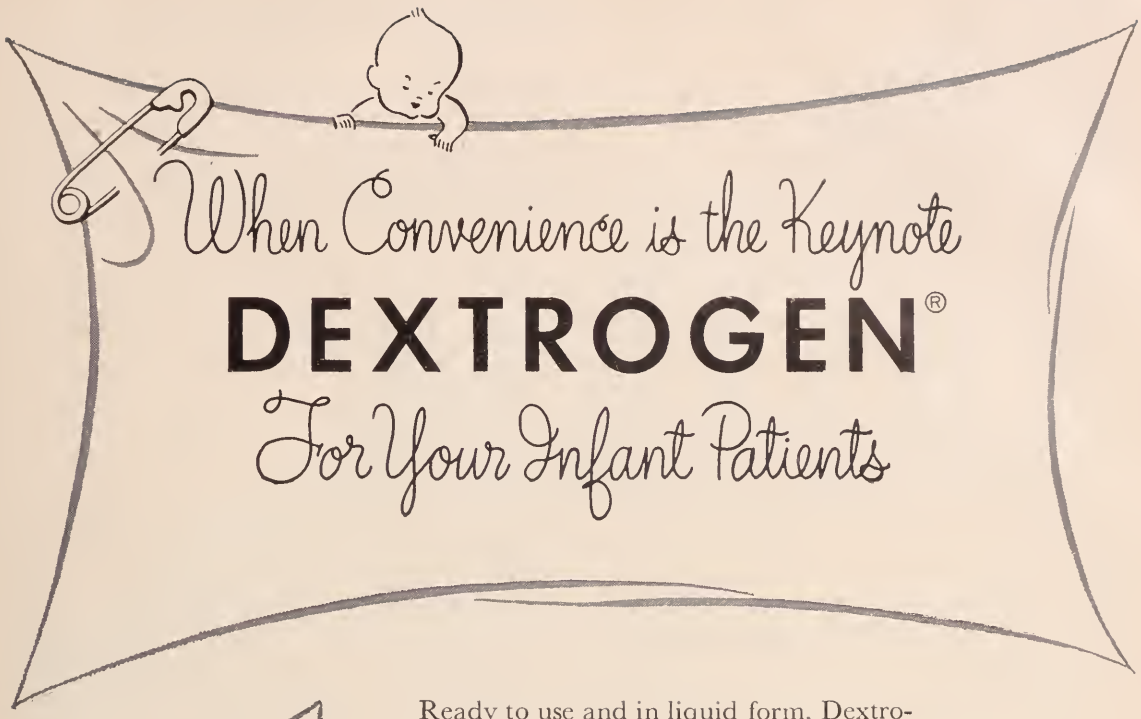
Howard A. Rusk, M.D. In HOSPITALS, 25:3:49, March 1951.

Early diagnosis and hospitalization and improved acute care are not enough for those persons stricken with poliomyelitis, for they do not meet the needs of the patients who are left with severe disability. A diversified but integrated program must be developed for such patients on the basis of their needs in meeting day-to-day life situations. They must be provided with a program of training that will teach them to utilize all their residual abilities to the maximum.

The practice of rehabilitation begins with the belief in the basic philosophy that the physician's responsibility does not end when the acute illness is ended; it ends only when the patient is retrained to live and work with what he has left. This basic concept of the physician's responsibility can be achieved only if rehabilitation is an integral part of medical care.

In Bellevue and Goldwater Hospitals and at the Institute of Physical Medicine and Rehabilitation, after the basic medical work and the range of motion, muscle strength and needs of daily living tests, the physicians, in conference with other staff members, prescribe a five-hour-a-day program for the patient. These prescribed activities include training in ambulation and

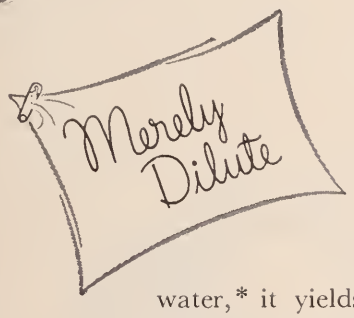
(*Continued on page 76*)



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Physical Medicine (Continued)

elevation, physical therapy, occupational therapy, speech therapy, therapeutic exercise, social service, psychological services or any other activity which may be helpful in meeting the specific needs of the patient.

Although it is obvious that the small community hospital cannot afford the space, equipment and personnel for such a full, comprehensive rehabilitation program, the basic activities of physical rehabilitation can be carried out in a small physical therapy department if it is well organized and staffed by trained physical therapists.

Where visiting nurse services and home care programs are available, much of the physical rehabilitation can be carried on in the home with periodic visits to the hospital's outpatient physical therapy department.

There are numerous community services which can contribute to the rehabilitation of the patient. It is the responsibility of the physician and the hospital administrator to see that the patient and his family are aware of these resources and that proper referral is made to them.

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Cullick, L. and Ogden, H. D.: J. South Med. Assn. 43: No. 7, July 1950

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BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

HANDBOOK OF PEDIATRIC MEDICAL EMERGENCIES By Adolph G. DeSanctis, M.D., Professor of Pediatrics and Chairman of the Department of Pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center; Director of Pediatrics, University Hospital, New York University-Bellevue Medical Center; Director of Pediatrics, Gouverneur Hospital, New York City, and Charles Varga, M.D., Instructor in Pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center; Assistant Attending Pediatrician, University Hospital, New York University-Bellevue Medical Center; Assistant Visiting Pediatrician, Gouverneur Hospital, New York City. 51 illustrations. The C. V. Mosby Company, St. Louis, 1951. 284 pages. $5.00.

DIABETES MELLITUS — Principles and Treatment By Garfield G. Duncan, M.D., Clinical Professor of Medicine, Jefferson Medical College; Director of the Medical Divisions of the Pennsylvania Hospital and the Benjamin Franklin Clinic, Philadelphia. Illustrated. W. B. Saunders Company, Philalelphia and London, 1951. 289 pages. $5.75.

IMMUNOLOGY By Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas, and Pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. Third edition. Illustrated. The C. V. Mosby Company, St. Louis, 1951. 731 pages. $8.00.

MEDICAL TREATMENT — Principles and Their Application. Edited by Geoffrey Evans, M.D., F.R.C.P., Consulting Physician, St. Bartholomew's Hospital. Butterworth & Co. (Publishers) Ltd., London, England, The C. V. Mosby Company, St. Louis, Mo., U. S. A., 1951. 1398 pages. $20.00.

A TEXTBOOK OF MEDICINE (Eighth Edition) Edited by Russell L. Cecil, M.D., Sc.D., Professor of Clinical Medicine, Emeritus, Cornell University, New York. Robert F. Loeb, M.D., Bard Professor of Medicine, Columbia University, New York. Associate Editors: Alexander B. Gutman, M.D., Professor of Medicine, Columbia University, New York; Walsh McDermott, M.D., Associate Professor of Medicine, Cornell University, New York; Harold G. Wolff, M.D., Associate Professor of Medicine Neur.), Cornell University, N.Y., 1627 pages, 204 figures, 40 tables. Philadelphia & London: W. B. Saunders Co., 1951. $12.00.

DISEASES OF THE HEART AND CIRCULATION. By Paul

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Wood, O.B.E., M.D. (Melbourne) F.R.C.P. (London), Director, Institute of Cardiology, London, Physician, National Heart Hospital, Physician in charge of the Cardiac department, Brompton Hospital, Cardiologist, Rheumatic Fever Unit, Canadian Red Cross, Memorial Hospital, Taplow, Late Consulting Cardiologist, Postgraduate Medical School of London, Hammersmith Hospital. J. B. Lippincott Company, Philadelphia, London, Montreal, 1951. 589 pages. $12.50.

PATTERNS OF DISEASE on a Basis of Physiologic Pathology. By Frank L. Apperly, M.A., M.D., (Oxford), D.Sc. (Melbourne), F.R.C.P. (London) Professor of Pathology, Medical College of Virginia, Richmond, Virginia. 50 figures and 37 charts. J. B. Lippincott Company, Philadelphia, London, Montreal. 456 pages. $8.00.

FEVER THERAPY. By H. Worley Kendeall, M.D., F.A.C.P., Professor of Physical Medicine and Rehabilitation, University of Illinois Research and Educational Hospitals, Chicago, Illinois. 101 pages. Charles C. Thomas Publisher, Springfield, Illinois, 1951. $2.25.

ANNOTATED BIBLIOGRAPHY OF VITAMIN E 1940 to 1950. Compiled by Philip L. Harris and Wilma Kujawski of The Research Laboratories of Distillation Products Industries, Rochester 3, N. Y. (Division of Eastman Kodak Company). 184 pages. $3.00.

NUTRITION AND ALCOHOLISM. By Roger J. Williams. University of Oklahoma Press, Norman. 82 pages. $2.00.

CANCER AS I SEE IT. By Henry W. Abelmann, M.D., Philosophical Library, New York. 100 pages. $2.75.

EMOTIONAL FACTORS IN CARDIOVASCULAR DISEASE. By Edward Weiss, M.D., Professor of Clinical Medicine, Temple University School of Medicine, Philadelphia, Pennsylvania. Charles C. Thomas, Publisher, Springfield, Illinois, 1951. 84 pages. $2.25.

ALLERGY: FACTS AND FANCIES. By Samuel M. Feinberg, M.D., Associate Professor of Medicine, Chief of Section of Allergy and Director of Allergy Research Laboratory, Northwestern University Medical School. Attending Physician, Passavant Memorial Hospital, President (1942-44) American Association for the Study of Allergy (now American Academy of Allergy) Harper & Brothers, New York, 173 pages. $2.50.

HANDBOOK OF MEDICAL MANAGEMENT. By Milton Chatton, A.B., M.D., Instructor in Medicine, University of California Medical School, San Francisco, Sheldon Margen, A.B., M.D. Clinical Instructor in Medicine, University of California Medical School, San Francisco. Henry D. Brainerd, A.B., M.D., Assistant Clinical Professor of Medicine and Pediatrics, University of California Medical School, San Francisco, Assistant Clinical Professor of Pediatrics, Stanford University School of Medicine, Physician

(Continued on page 80)

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in Charge, Isolation Division, San Francisco Hospital. Second Edition. University Medical Publishers, Post Office Box 761, Palo Alto, California. 507 pages. $3.00.

De Re Medica. Eli Lilly and Company, Indianapolis, Indiana, 1951. 643 pages.

The Kidney: Structure & Function in Health & Disease. By Homer W. Smith, A.B., Sc.D., M.S. Professor of Physiology, New York University College of Medicine. Oxford University Press, 114 Fifth Avenue, New York 11, New York, 1050 pages. 150 illustrations. $12.50.

Eternal Eve. The History of Gynaecology and Obstetrics. By Harvey Graham. 700 pages. Illustrated. Doubleday & Company, Inc., 575 Madison Avenue, New York 22, New York. 1951. $10.00.

Annals of the New York Academy of Sciences, Volume 54, Art. 1, Pages 1-142, "Leprosy", by E. Grunberg and nineteen other authors. The New York Academy of Sciences, 2 East Sixty-Third Street, New York 21, New York. $2.75.

Annals of the New York Academy of Sciences, Volume 53, Art. 3, Pages 461-752, "The Growth, Replacement, and Types of Hair". By J. B. Hamilton, A. E. Light and 24 other authors. The New York Academy of Sciences, 2 East Sixty-Third Street, New York 21, New York. $4.00.

Annals of the New York Academy of Sciences, Volume 51, Art. 8, Pages 1279-1546, "The Mechanisms of Cell Division". By M. J. Kopac and others. The New York Academy of Sciences, 2 East Sixty-Third Street, New York 21, New York. $3.50.

Antibiotics & Chemotherapy. Journal of Experimental and Clinical Studies on Antibiotics, Hormones, and Chemotherapeutics. Published by the Washington Institute of Medicine for M.D. Publications, Inc., 667 Madison Avenue, New York 21, New York. Vol. 1, No. 1. One year $10.00. Three Years $22.50.

Diabetes Insipidus. By Harry Blotner, M.D., Associate Visiting Physician, Beth Israel Hospital, Boston, Mass. Edited by Henry A. Christian, A.M., M.D., LL.D., Sc.D. (Hon.), M.A.C.P., Hon. F.R.C.P. (Can.), D.S.M. (A. M. D.) Oxford University Press, New York, 1951. 194 pages.

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The American Association of Blood Banks was founded in 1947 at a meeting of the Blood Bank Institute held in Dallas. Since organization, the membership has increased to 725 members representing 46 states and 9 foreign countries.

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Further details about the Association or its meeting may be obtained by contacting the Office of the Secretary, 3301 Junius Street, Dallas 1, Texas.

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Dr. Grant also will assume the duties of National Medical Director of the Red Cross, succeeding Dr. G. Foard McGinnes, who has resigned effective July 15.

Dr. Ross T. McIntire will continue to serve as chairman of the blood program Medical Policies and Procedures Committee, composed of prominent physicians. Dr. Russell L. Haden who has been serving as medical director will become associate director and will be responsible for medical phases of the program.

In his new post Dr. Grant will direct all phases of the Red Cross Blood Program and be responsible for the further extension of the program to meet increased military and civil defense needs. The program now is providing blood for military requirements both domestically and abroad, and for civilian needs, as well as stockpiling plasma for national defense. His home is Virginia Beach, Virginia.

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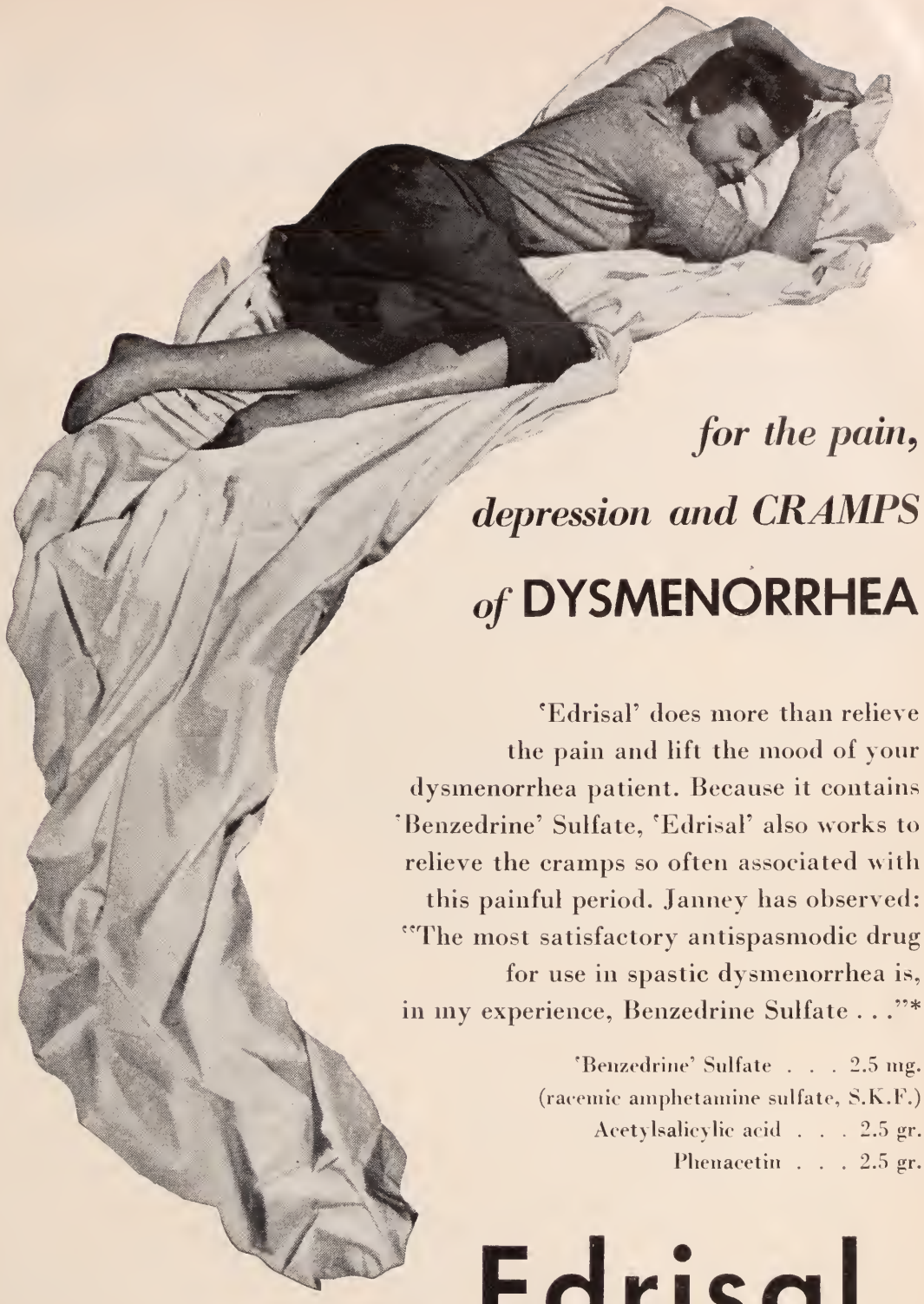
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*Janney, J.C.: Medical Gynecology, ed. 2, Philadelphia, W.B. Saunders, 1950, p. 365.



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